

The Only Weekly Mining Paper in the Union and Rhodesia.

THE

South African

# MINING JOURNAL

Physical &  
Applied Sci.  
Serials

WITH WHICH IS INCORPORATED

The South African Mines, Commerce & Industries

ESTABLISHED 1891

PUBLISHED EVERY SATURDAY

VOL. XXVI., PART II. No. 1342.] THE SOUTH AFRICAN MINING JOURNAL. JUNE 16, 1917. [WEEKLY, PRICE 8D.

P.O. Boxes 1553 & 1671.

Tel. Add.: "AINS CO."

Telephones 356 & 1308.

## HERBERT AINSWORTH

304-307, The Corner House (Third Floor), Johannesburg.

AGENT FOR:

Gates Rock Breakers.

GREEN'S FUEL ECONOMISERS.

Ball Bearing Idlers (FOR CONVEYORS).

KENNICOTT WATER SOFTENERS.

Crane Co.'s Valves and Fittings.

WOOD'S STEAM AND AIR WINCHES.

Carbide, Canadian "S" Brand.

ACETYLENE HAND AND BUCKET LAMPS.

Allis-Chalmers Co.'s

MINING MACHINERY

# ROBERT HUDSON & SONS, LIMITED.

WORKS: GILDERSOME FOUNDRY, Near LEEDS.

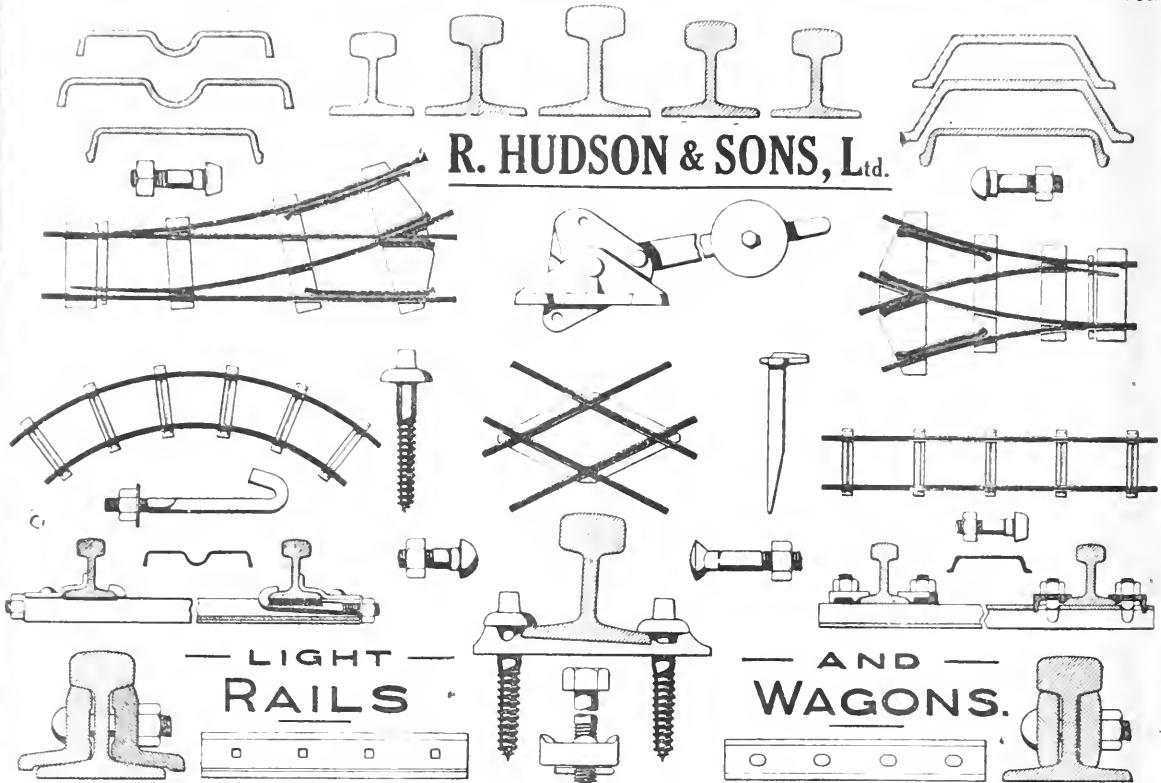
Phone 1731. Box 5744. JOHANNESBURG.

Tel. Add.:  
"RALETRUX."

MANUFACTURERS OF

Tramway Material for Mines, Plantations, etc.

N° 768.



## LIGHT LOCOMOTIVES.

STEEL WAGONS FOR GOLD AND DIAMOND MINES.  
HOPPER WAGONS FROM ONE TO FORTY TONS CAPACITY.

Steel Colliery Tubs. — Self-Oiling Wheels and Axles. — Bearings.  
Wagons for Sugar Cane Plantations.

## STEEL RAILS—ACCESSORIES—STEEL SLEEPERS

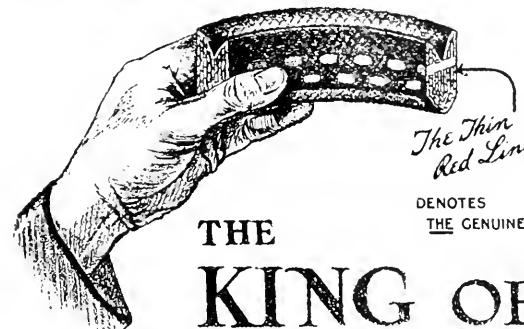
PRICES AND SPECIFICATIONS ON APPLICATION.

Large Stocks held at DURBAN, DELAGOA BAY, BEIRA, JOHANNESBURG, SALISBURY, etc.

Rhodesian Agents: P. PEECH & CO., Salisbury, Rhodesia.

HEAD OFFICE: 82, 83, 84, Cullinan Building, Johannesburg.

“LION” CONTRACTORS TO H.M. GOVERNMENT



WALKER'S LION PACKING

The Thin Red Line  
DENOTES  
THE GENUINE

THE KING OF PACKINGS

FOR STEAM AND HYDRAULIC WORK.  
MADE IN RINGS OR SPIRAL FORM

REFUSE ALL  
IMITATIONS

SOLE AGENTS:

C. WHARTON HOOD & CO., Ltd.

P.O. Box 6096. Phone 973.

OFFICES: SOUTHERN LIFE BUILDINGS,  
HARRISON STREET, JOHANNESBURG

# "INDUSTRY AS USUAL."

## LIST OF

### Manufacturers & Agents belonging to the British Empire, her Allies & Friends.

#### HERBERT AINSWORTH,

Engineer and Merchant, 304-307, The Corner House, Johannesburg, South African Agent for Green's Patent Fuel Economisers, Kennecott Water Softeners, Wood's Colliery Plants and Winches, Hart's Lambeth Cotton Ropes, Canadian Carbide, "S" Brand

#### EDGAR ALLEN & CO., LIMITED,

5, New Club Buildings, Loveday Street, Johannesburg. Miner's Drill Steel, High Speed Steel, Engineer's and Smith's Tool Steel, Tappet Key and Gib Steel, Manganese and Hard Steel Grizzly Bars, Tube Mill Liner Bars, Skip Wheels, Truck Wheels and Axles, Twist Drills, Shovels, Hammers, Shoes and Dies, Buffers, Railway and Tramway Points and Crossings, Ore Crushers, Tube Mills, Cement Kilns, etc.

#### BARTLE & CO., LTD.,

Loveday House, Johannesburg. Phones 3553-4. Sale Agents for Sanderson Bros. & Newbold, Ltd., Sheffield; F. Reddaway & Co., Ltd., Manchester; Henry Pooley & Son, Ltd., Birmingham; John Shaw, Ltd., Sheffield; J. W. Roberts, Ltd., Leeds; Gimson & Co., Ltd., Leicester; T. Lister & Co., Ltd., Brightone; John Davis & Son, Ltd., Derby; Unity Safety Fuse Co., Scorrer; F. Bartle & Sons, Carn Brea; and many other well-known British Manufacturers.

#### BRITISH GENERAL ELECTRIC CO., LTD.,

Corner Loveday and Anderson Streets, Johannesburg. Electrical Plant and Supplies of all descriptions. Phones 4232-4243; Telegrams, "Current"; Box 2406. Branches at Capetown, Durban, Bulawayo, etc.

#### CHRISTOPHER & SHILLITO,

Engineers and Iron Founders, corner of Miller and Eighth Streets, New Doornfontein, Johannesburg; P.O. Box 3273. Phones: Works, 2184; Town Office, 3484. Specialities: Steelwork, Castings, Trucks, Coal Tubs, Forgings, Tanks, Pump Spares, Mill Spares, Shoes and Dies (old Park Forge, Sheffield, England).

#### HUBERT DAVIES & CO.,

Electrical and Mechanical Engineers, for all kinds of Electrical Machinery and Supplies. Johannesburg, Durban, Cape Town and Salisbury (Rhodesia).

#### The Denver Rock Drill & Machinery Co., Ltd.

Phone 1426, Box No. 2367. 15, Royal Chambers, Johannesburg. "WAUGH" Air Feed Hammer Drills, for all classes of mining; DENVER Brand of Rubber Conveyor Belting; Rock Drill and Water Hoses, Red Sheet Packing, Grey Insertion; "DUXBAK" Waterproof Leather Belting and Waterproof Cement; "CLARK" Air Meters. Large Stocks always on hand.

#### FRASER & CHALMERS, LTD.,

Corner House, Johannesburg; also representing Holman Bros., T. and W. Smith, Ltd.; Tangye, Ltd.; G. and J. Weir, Ltd.; and many other British agencies.

#### HADFIELDS LTD.

(Incorporated in England.)

46-47, Cullinan Buildings. Phone 5900, Johannesburg. Cast Steel Gyrating and Jaw Crushers and Crusher Spares, Wheels and Axles, Pedestals, Rollers, Pulleys and General Steel Castings.

#### HOSKEN & CO., WM.,

Mining Material Merchants, Hosken's Buildings, P.O. Box 667. Phones 4113-9. Telegrams: "Hosken," Johannesburg. Agents for "Hydromax" New Water Hammer Drills. The fastest rock drill in the world.

#### ROBERT HUDSON & SONS, LIMITED,

Works: Gildersome Foundry, near Leeds. 83-4, Cullinan Buildings, Phone No. 1731. Telegraphic Address: "Raletrux." Manufacturers of all classes of Light Railway Material for Mining and Contractor use. Rails in all weights per yard. Switches and Crossings. Standard Trucks of various capacities kept in stock.

#### INGERSOLL-RAND CO.,

Exploration Building, Johannesburg. Air Compressors, Rock Drills, Hoes, Steel, Pneumatic Tools, Cameron Pumps, Leynor Drill Sharpeners, Davis Calyx Coil Drills.

#### PHOENIX FOUNDRY,

Iron and Brass Founders, General Engineers and Blacksmiths Office and Works: Hay Street, Ophirton. P.O. Box 3031, Johannesburg. Phone 1641. Sole Agents for Carnyne Steel Casting Co., Glasgow. Stocks of Tappets, Skip Wheels, Heads, etc. Casting Specialities: Pipe Fittings, White Iron Pump Spares and Tube Mill Liners.

#### REUNERT & LENZ, LTD.,

Consolidated Building (3rd Floor), Johannesburg; P.O. Box 92; Telephone No. 3061. Sole Agents for North British Locomotive Co., Ltd.; Leeds Forge Co., Ltd.; Babcock and Wilcox, Ltd.; Belliss and Morcom, Ltd.; Davidson and Co., Ltd.; Frank Pearn and Co., Ltd.; "Atlas Rock Drills," John Stephens and Son, Ltd.; E. and W. Lucas, Ltd.; Sir Joseph Jonas, Colver and Co., Ltd.; John Spencer and Sons, Ltd.; and many other high-class British Manufacturers.

#### SANDYCROFT, LIMITED,

Works: Chester, England. Offices, 63-64, Standard Bank Chambers, Telephone No. 360, P.O. Box No. 1976, Johannesburg. Suppliers of Stamp Battery Requisites of all descriptions, Belting, Winches, Ropes, etc.

#### FATTI'S S.A. MACARONI FACTORY.

Fatti's Macaroni Factories are the suppliers of the much-appreciated Soup-Macaroni for the Mine Boys. They inform the Mine and Compound Managers that in spite of the present high cost of the flour their price for this healthy and very nourishing food has been kept at the pre-war level, thus making MACARONI the MOST ECONOMICAL food of the present time. For orders and quotation please apply to Box 1139, or Phone 962, Johannesburg.—L. Fatti and Co., Ltd.

#### S. SYKES & CO., LTD.

Southern Life Buildings, Johannesburg. Telephone No. 2190, P.O. Box 2503. Telegrams: "Psyche." Sole Agents for Robey & Co., Ltd., Crossley Bros., Ltd., E. R. & F. Turner, Ltd., Worthington Pump Co., Ltd., C. A. Parsons & Co., Ltd., Crompton & Co., Ltd., and Reyrolle & Co., Ltd.

#### E. W. TARRY & CO., LTD., Austral Iron Works,

Corner of Anderson and End Streets, Box 1098. Phones 149 and 626, Johannesburg. Iron and Brass Founders and General Engineers. Machine Cut Gears in Raw Hide and any Metal a speciality, and in Cast Iron up to 18 feet diameter. Sole Manufacturers and Agents for Tregaskis Patent Drill Heating Furnace.

#### WADE & DORMAN, LTD.,

Box 2997; Telephone 1460, Johannesburg. Structural Steel Work of all kinds. Large Stocks of Joists, Channels, Angles, Tees, Plates, Chequered Plates, etc. Agents for British Steel Piling Co. Stockyard and Works: 217, Main Street.

#### WHARTON HOOD & CO., LTD.

Box 6096, Telephone 973. Tel. Address: "Castings." Sole Agents for Jenkins Bros., Ltd., Montreal; Geo. Christie, Ltd., Glasgow; James Walker & Co., Ltd., London; Garlock Packing Co., New York. Offices: Southern Life Buildings, Johannesburg.

#### C. F. WIENAND,

Commercial Exchange Buildings, Johannesburg; Phone 3. Sole Agent for Toledo Steels of all classes, Butterley Iron, Barwell's Bolts, Scott's Ropes, Mine Lubricants, Ltd., Stelaric Tyres. All highest quality.

## PROFESSIONAL DIRECTORY.

**LITTLEJOHN & WHITBY,**  
ASSAYERS TO THE  
AFRICAN BANKING CORPORATION,  
NATIONAL AND NATAL BANKS.

CONSULTING ANALYTICAL  
CHEMISTS AND METALLURGISTS,

P.O. Box 849. 'Phone 1633.

Office and Laboratories:  
24, SIMMONDS STREET, JOHANNESBURG.

Assays and analyses of all Minerals, Drugs, Foods, Water, Milk, Oils, etc., undertaken.

Experiments conducted. Reports made as to the treatment of any class of Ore.

**PATENTS AND TRADE MARKS**

**D. M. KISCH & CO.,**  
(C. H. M. KISCH—A. L. SPOOR).

ESTABLISHED 1874.

Members Chartered Inst. of Patent Agents, London.

**COLONIAL AND FOREIGN PATENT AGENTS**

The Firm undertake the Patenting of Inventions, and the Registration of Trade Marks throughout the world; the Preparation, Revision or Amendment of Specifications and Drawings; reporting on Validity and Infringements; obtaining copies of Specifications and Drawings of Patents granted; Searches through the Patent Office Records; the conduct of Oppositions, and all other matters relating to Patents and Trade Marks.

No. 16 to 19a, NATIONAL MUTUAL BUILDING,  
Corner of Rissik and Market Streets.

P.O. Box 668. Telephone No. 774.

## FOR SALE.

10 Stamp Battery—1,050lb.  
1 Tube Mill, 16ft. x 5 ft. 6in.  
Davidson.  
1 Boiler, Davey Paxman,  
12 h.p.  
Tangye Driving Engine, 16in.  
x 10in.  
Tangye Driving Engine, 8in.  
x 14in.

Tangye Driving Engine, 16in.  
x 26in.  
2 Crushers, Blake Marsden.  
Sirocco Fan, 24in., 9in. delivery  
100,000 feet Piping, 1in. to 8in.  
Second-hand Timber and Iron  
in large quantities.  
Pumps in great variety.  
Valves and Pipe Fittings.

**A. SONNENBERG & CO., LTD.,**  
115, Marshall Street, Johannesburg.  
Box 4297. Phone 1582.

**J. GOULDIE, C. & M.E., M.I.M.E.,**  
CONSULTING ENGINEER.

Late Manager to the De Beers and other Diamond Mines,  
30 years practical experience in Diamond, Gold, Coal, and  
Metalliferous Mining in South Africa, and holder of Mine  
Manager's Certificate (First Class).

Mines and Mineral Propositions Inspected and  
Reported Upon.

Office: 62, Standard Bank Chambers, Commissioner St.,  
JOHANNESBURG.

Phone 2225. Telegraphic Address: "Edloug, Johannesburg."

Code: Imperial Combination and A.B.C. (5th edition).

Reference: The National Bank of South Africa, Limited, here  
and in London.

**J. E. MILLS DAVIES,**  
CONSULTING MINING ENGINEER.

180, Stock Exchange Buildings, Johannesburg.

P.O. BOX 418. TEL. ADD: "MINING JOURNAL." TELEPHONE 913

When communicating with Advertisers  
kindly mention the

**SOUTH AFRICAN MINING JOURNAL.**

## The S.A. Mining and Engineering Year Book '916.

By S. R. POTTER.

The Standard Reference Work on South African Mines.

Price 15/- net. Post free 17/- 478 pp. In Cr. Folio, Cloth, Gilt Letters  
Obtainable from the Office of this Paper.

**A Recognised Indispensable Work of Reference**

For Mining Investors, Mining Engineers, Mine Managers, Bankers, Stockbrokers, Solicitors or anyone interested in the Mining Industry.  
A RECORD OF INFORMATION concerning Mining Companies operating in all parts of South Africa. Gold, Diamond, Copper, Tin and other Mines, Collieries, Exploration, and Mining Investment Companies, arranged in alphabetical order.

**SOME PRESS OPINIONS.**

"A complete account of the present position and future prospects of South African Mines, put on permanent record for ready reference." — "The Star."

"The only authoritative work of reference on South African mining companies produced in this country." — "Rand Daily Mail"

"To holders of Kaffir shares and prospective investors this is an aggregate of authoritative information that has a distinct value." — "Financial News."

Cable:  
McKECHNIE.  
WIDNES."

**McKECHNIE BROTHERS, LIMITED.**

SMEILING WORKS: WIDNES, ENGLAND.

BIRMINGHAM, NEWCASTLE, MANCHESTER, LEEDS AND BRISTOL.

BUYERS OF

**COMPLEX ORES**

Which contain COPPER.

COPPER-TIN ORES. COPPER-LEAD ORES. COPPER-ZINC ORES

Residues, Mattes, Concentrates, Precipitates

## Engineering Works and Foundries.

ESTABLISHED 1888.

### Wright, Boag & Co.

#### ENGINEERS AND FOUNDERS.

Offices: Frederick Street.

Works: Marshall's & City and Suburban Townships.

Telephones:  
1056 and 1057.

P.O. Box  
545.

Tel. Add.:  
"SWIVEL."

JOHANNESBURG.

Austral  
Iron  
Works.

#### ENGINEERS AND FOUNDERS.

Special Metal for  
wearing plates for  
Tube Mills and  
Centrifugal Pumps.

Machine Cut Gears in Raw Hide or any Metal  
Speciality.

And in Cast Iron up to 18 feet diameter.

Sole Agents and Manufacturers of Tregaskis'  
Drill Heating Furnace.

### E. W. TARRY & CO., LTD.

Anderson and End Streets,

### JOHANNESBURG.

Phone 149. Box 1098. Tel. Add.: Austral."

### THE TRANSVAAL GRAPHITE M. & M. CO., LTD

W. M. HUDSON, Managing Director.

Foundry Plumbago.—Flake Graphite.—Pipe Jointing.—"Murrella" Boiler  
Composition.—Graphite Pigment, etc.

Office: 20, Cullinan Building, Johannesburg. Phone 2560.

P.O. Box 3960.

Telephone No. 877

### W. H. BATTEN

(Late BATTEN & EDGAR)

The RAND BOILER, TANK,  
:: and IRON WORKS. ::

Trucks, Steel Cyanide Tanks, Chimneys, Cones, Skips, and all  
Mining Plate Work a speciality.

Office and Works: Albert, Gold, Durban and  
Nugget Streets, City and Suburban.

### VERDITE MINES, Ltd.

Offices and Showrooms:  
STOCK EXCHANGE, JOHANNESBURG.

French Chalk.—Talcum Powder.  
Engineers' and Boilermakers' Pencils.  
"Verdite" Greenstone Ornaments & Jewellery.

The Only Producers in the British Empire.

Special Quotations for French Chalk to Manufacturers.  
STOCKS ALWAYS ON HAND.

### SOUTH AFRICAN WELDING AND LIGHTING GAS WORKS.

P.O. Box 5185. Tel. No. 2046.

LESSEES FROM

SOUTH AFRICAN DISSOLVED ACETYLENE, Ltd.

Welding Shop: 29, Von Weilligh St., Johannesburg.

Gas Works:

No. 4, Thornton's Sheds, Van Beek St., Doornfontein.

Welding by High and Low Pressure Systems.

Constructional and Repair Work in Shop or at Mine.

Boiler Work and Plate-Cutting a Speciality.

All classes of Cast or Steel Fittings made up to order.

When communicating with Advertisers

kindly mention the

SOUTH AFRICAN MINING JOURNAL.

P.O. Box 11, Denver.

Phone 154, Central.

## DENVER ENGINEERING WORKS.

Chisholm Stevenson & Co.

### Main Reef Road, Denver.

ENGINEERS, BLACKSMITHS,  
IRON & BRASS FOUNDERS.

Makers of Haulage Gears, Tanks, Trucks, Cones, Cages,  
and Mining Machinery of all descriptions.

ENQUIRIES INVITED.

ESTIMATES GIVEN.

Phone 1875. P.O. Box 4782. Tel. Add. : "PRAESENS."

## M. ESPLEY JONES,

Merchant in Mining Materials.

Sole South African Agent for Garside Engine Waste.  
Contractor to South African Railways, Witwatersrand  
Gold Mines, Collieries, etc.

Large Stocks of Various Grades carried Locally.

9a, Commercial Exchange, Main St.,  
JOHANNESBURG.

ESTABLISHED 1884.

## The Financial News

DAILY - - - - ONE PENNY.

OFFICES :—

111, Queen Victoria Street, London, E.C. 4.

The Financial News is the oldest and most  
influential Daily Financial newspaper in the  
world; and is acknowledged to be the most  
Potent Authority in the World of Finance,  
and an Advertising Medium of unique value.

#### SPECIAL FEATURES :

Banking; Insurance; Mining; Rubber; Oil;  
Engineering; Shipping; Land and Estates;  
—Miscellaneous Industries, &c., &c.—

READ

## The Financial News

—THE GREAT CITY DAILY.—

## Britannia Engineering Co. LIMITED.

General and Mechanical Engineers.

IRON AND BRASS FOUNDERS.

BOILER AND GENERAL SMITHS.

Repairs and Renewals promptly and efficiently executed.  
Sole Makers of the Hearn Patent Pendulum Pump.

201-3-5, Main Street and 220-2-4, Fox Street,  
Box 1558. JOHANNESBURG. 'Phone 896.

## Durban Roodepoort G.M. Co., Ltd.

(REGISTERED IN ENGLAND.)

NOTICE IS HEREBY GIVEN that an Eighty-sixth (86) Interim  
Dividend of Five per cent. (5 p.c.), equal to 1s. (One Shilling) per  
share, has been declared payable on and after the 7th (Seventh)  
July, 1917.

Holders of Shares to Bearer should present Coupon No. 86 for  
payment of the above 1/- (One Shilling) per share at the Standard  
Bank of South Africa, Ltd., Johannesburg Branch, on and after  
the 7th July, 1917.

W. A. MARTIN.

W. MACFARLANE.

L. CLARENCE.

G. S. KEMPIS. Local Directors

Johannesburg, 8th June, 1917.

## PRICE'S CANDLES

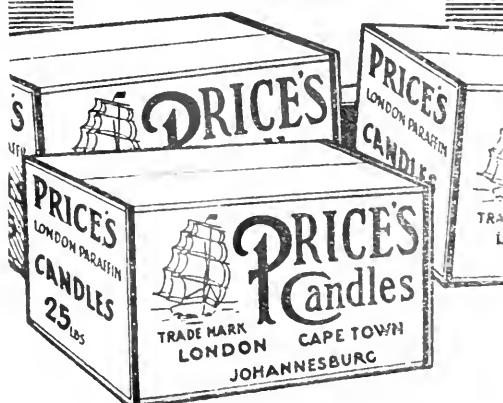
First and Best

for

Mining  
and  
General Use.

Made in  
South Africa.

PRICE'S (South Africa) Limited,  
London, Cape Town, Johannesburg.



# A. GOERZ & COMPANY, LIMITED.

(Incorporated in the Transvaal.)

## ABRIDGED REPORT OF THE DIRECTORS.

In submitting to the Shareholders the Accounts of the Company for the year ended December 31, 1916, the Directors state, inter alia:—

The Profit and Loss Account for the twelve months shows a balance of profit, before allowing for losses by depreciation and writing-off, of £97,497, to which must be added the profit of £18,683 4s. 5d. brought forward from 1915, making a total of £116,180 4s. 5d. This amount (less £182 14s. 2d. written off Office Furniture, Fittings and Vehicles) has been utilised to meet part of the past depreciation existing on certain of the shareholdings. In order to meet the balance of such depreciation and to write down other assets to conservative figures, so as to permit of the resumption of dividend payments, it is proposed to reduce the Capital of the Company by writing down the nominal value of each share to 12s. 6d., and special attention is called to the Circular and Notice of Extraordinary General Meetings of Shareholders sent with this Report.

The financial position on December 31st, 1916, showed an excess of cash assets, Government securities and sundry debtors over liabilities of £244,322 4s.

There has been no change in our interests in Mexico since the issue of our last report. The condition of affairs in that Republic continues to be unsatisfactory. Matters have not been improved by the issue of a Decree on September 14th last calling upon all

mining companies to resume work under penalty of forfeiture of their properties except where it can be shown that such resumption is impracticable. In the case of the two principal companies in which we are interested—La Fe Mining Co., and the San Francisco Mines of Mexico—political conditions have prevented, and still prevent, the resumption of work, owing, inter alia, to the impossibility of securing regular supplies, not merely because of the irregularity or stoppage of the railway communications in the country, but because present world conditions make the procuring of the necessary stores, and especially of cyanide, a matter of practical impossibility. It is doubly regrettable that work cannot yet be resumed, as the present prices of silver and base metals would be highly beneficial to both companies.

Mr. P. M. Anderson, who has been connected with the mining companies of our Group for a considerable time, has been appointed Consulting Engineer to the Company, to fill the vacancy created by the resignation of Mr. Benjamin Madew.

The Directors retiring in accordance with Clause 74 of the Articles of Association are Count Jean d'Ayguesvives and Sir Carl Meyer, Bart., who, being eligible, offer themselves for re-election.

The Auditors of the Company, Messrs. Price, Waterhouse and Company and Messrs. F. W. Diamond & English, also retire, and offer themselves for re-election. The shareholders will be asked at the General Meeting to fix their remuneration.

Dr.

### BALANCE SHEET, DECEMBER 31st, 1916.

Cr.

CAPITAL AND LIABILITIES		
To Authorised Capital, £1,500,000, of which £1,400,000 is Registered Capital.		
.. Capital Issued— 1,400,000 Ordinary Shares of £1 each .....	£1,400,000 0 0	
.. Sundry Creditors .....	416,593 4 6	
.. Stock bought but not taken up at 31st December .....	1,661 12 4	
.. Contingent Liabilities— Uncalled Capital on Shares in other Companies and Sundry Participations .....	£95,437 10 0	

PROPERTIES AND ASSETS.		
By Shares and Debentures in other Companies (taken at or under cost)	£1,111,274	5 3
.. Sundry Participations and Interests (taken at or under cost) .....	3,784 13 9	
.. Claim and Land Holdings (taken at or under cost) .....	25,768 17 0	
.. Real Estate and House Property in Johannesburg .....	14,000 0 0	
.. Office Furniture, Fittings and Vehicles .....	850 0 0	
.. Sundry Debtors— Advances to Affiliated Companies .....	£245,594	3 3
Other Debtors .....	52,401	3 6
.. Stock sold but not delivered at 31st December .....	2,720 19 8	
.. Temporary Advances against Securities (including Shares and Stocks taken in) .....	72,992	0 10
.. Government Securities (taken at or under cost) .....	34,940	0 0
.. British Treasury Bills .....	237,727	7 10
.. Caution Money Deposited .....	224 10 0	
.. Cash at Banks and in hand .....	15,976	15 9
	£1,818,254	16 10

## A. Goerz &amp; Company, Limited.—continued.

## Dr. PROFIT AND LOSS ACCOUNT for the Year ended December 31st, 1916. Cr.

To Salaries of the Managing Director, of the Staffs, and of the Mining and Mechanical Engineering Departments (less Fees received) ...	£10,317 9 9	By Realised Profits on Sale of Shareholdings ...	£18,957 16 0
.. Rents, Insurance, Rates and Taxes ...	4,513 8 0	.. Dividends and Interests ...	101,407 16 1
.. Cable, Telegraph, Telephone and Postage Expenses ...	842 6 1	.. Rent and Sundry Receipts ...	1,593 7 1
.. Stationery, Printing and Advertising ...	1,252 9 5	.. Transfer and Bearer Warrant Fees (less costs of Certificates) ...	96 10 0
.. Exploration Expenses, Claim Licences and Travelling Expenses ...	2,536 14 8		
.. Legal Charges ...	856 4 4		
.. Directors' Fees ...	1,600 0 0		
.. Auditors' Fees ...	449 11 4		
.. Charitable and other Contributions ...	655 18 9		
.. Sundry Expenses ...	1,534 6 10		
.. Balance carried down ...	97,497 0 0		
	£122,055 9 2		£122,055 9 2
To Written off:—			
Shareholdings ...	£115,997 10 3	By Balance brought forward from 31st December, 1915 ...	£18,683 4 5
Office Furniture, Fittings and Vehicles ...	182 14 2	.. Balance brought down ...	97,497 0 0
	£116,180 4 5		
		On behalf of the Board,	
		JOSEPH TEMPERLEY,   Directors.	£116,180 4 5
		CARL MEYER,	

We have examined the above Balance Sheet and Profit and Loss Account with the Johannesburg Accounts, as audited by Messrs. F. W. Diamond & English, and with the books and vouchers in London, and have received all the information and explanations we required. We report that, in our opinion, the Balance Sheet is properly drawn up so as to exhibit a true and correct view of the state of the Company's affairs according to the best of our information and the explanations given to us and as shown by such Books and Accounts. The whole of the Assets are taken into the Balance Sheet at figures at or below cost. The political conditions prevailing in Mexico are such that we desire to point out that the Company has an important interest in the La Fe Mining Company which stands at cost in the Balance Sheet under the headings "Shares" and "Advances."

We have received proof of the Assets included under the headings of Shares and Debentures (except those in Berlin, standing in the books at £11,854 9s. 8d.), Temporary Advances, Government Securities, British Treasury Bills, and Cash, those in South Africa having been certified by Messrs. F. W. Diamond & English. The title of the Company to the Investments in Real Estate and Claim and Land Holdings in South Africa has been examined and certified by Messrs. Webber & Wentzel, the Company's Solicitors in Johannesburg.

3, Frederick's Place, Old Jewry, London, E.C.,  
18th April, 1917.

PRICE, WATERHOUSE & CO., Auditors.

## The Modderfontein Deep Levels, Ltd.

(Registered under the Limited Liability Laws of the Transvaal.)

## GEDULD PROPRIETARY MINES, LTD.

(Registered under the Limited Liability Laws of the Transvaal.)

## DECLARATION OF DIVIDEND No. 5.

NOTICE IS HEREBY GIVEN that Dividend No. 5, at the rate of 40 per cent. (8s. per share), has this day been declared, payable to shareholders registered at the close of business on Saturday, 30th June, 1917, after receipt of the necessary returns from the London Office. Dividend Warrants will be despatched to registered shareholders as early in August as the Mail Service permits.

The Transfer Books and Register of Members will be closed from the 1st to the 7th July, 1917, both days inclusive.

By Order of the Board,

C. L. CHALMERS, Secretary

Head Office: 94, Main Street,  
Johannesburg (P.O. Box 1125),  
13th June, 1917.

## DECLARATION OF DIVIDEND No. 6.

NOTICE IS HEREBY GIVEN that Dividend No. 6, at the rate of 5 per cent (1s. per share) has this day been declared, payable to shareholders registered at the close of business on Saturday, 30th June, 1917, and to holders of Coupon No. 6 attached to Share Warants to Bearer, after receipt of the necessary returns from the London Office. Dividend Warrants will be despatched to registered shareholders as early in August as the Mail Service permits.

The Transfer Books and Register of Members will be closed from the 1st to the 7th July, 1917, both days inclusive.

By Order of the Board,

C. L. CHALMERS,  
Secretary

Head Office:  
94 Main Street, Johannesburg,  
(P.O. Box 1125),  
13th June, 1917.

## THE SOUTH AFRICAN MINING JOURNAL.

The Only Weekly Mining Paper in the Union and Rhodesia.

P.O. BOX 1553.

Telegraphic Address: "AINSCO."

TELEPHONE 356.

# HERBERT AINSWORTH,

304-307, THE CORNER HOUSE (THIRD FLOOR), JOHANNESBURG.

# CRANE

# NAVY

UNION BONNET  
REGRINDING  
TESTED TO 250 LBS.

FOR PRESSURES UP TO  
175 LBS.  
CAN BE PACKED WHEN  
OPEN.  
CAN BE REGROUND  
WITHOUT DETACHING.

MADE IN  
GLOBE, ANGLE & CHECK PATTERNS.

# VALVES

## CONSOLIDATED RAND BRICK, POTTERY AND LIME COMPANY, LIMITED.

P.O. Box 609.

Telegraphic Address: "INDUSTRY."

Phone No. 1232.

Manufacturers of Pressed Hofman Kiln Bricks, Downdraught Blue Building Bricks, White and Salt Glazed Bricks, Finest Ground Fireclay, and Fireclay Goods of all descriptions.

Sewerage and Irrigation Pipes and Fittings in all sizes. Fire Bricks, Liners, Crucibles, Fireclay Blocks, etc.

**SPECIALITIES:**—Pan Furnace Blocks, Drill Furnace Blocks, Loco. Furnace Arches, Baffle Bricks, etc.

Our Pipes, etc., are equal to the best English manufacture, and are largely used by the Public Works Departments, Municipalities, Contractors, the Mines in the Union and also Rhodesia.

Large Stocks of Pipes and Fittings suitable for Agricultural and Stormwater Purposes always on hand.

For samples and particulars apply to Office:—

**No. 48, CULLINAN BUILDINGS,**  
Corner Main and Simmonds Streets, Johannesburg.

THE SOUTH AFRICAN  
**Mining Journal.**  
 WITH WHICH IS INCORPORATED  
*South African Mines, Commerce and Industries.*  
 ESTABLISHED 1891.

VOL. XXVI., PART II.] JUNE 16, 1917. [No. 1342.

**HEAD OFFICE:** 176-180, Stock Exchange Buildings, Fox Street (2nd Floor), Johannesburg, Union of South Africa.

Telephone 913. P.O. Boxes 963 and 418.

Cable and Telegraphic Address: "MINING JOURNAL."

**AGENTS FOR GREAT BRITAIN:** Argus South African Newspapers, Ltd., Byron House, 82-85, Fleet Street, London, E.C.

**AMERICA:** Gotham Advertising Co., 95, Liberty Street, New York.

**ANNUAL SUBSCRIPTION RATES:** Oversea, £2; Union of South Africa and Rhodesia, £1 10s.; Local Delivery (Town only), £1 6s.

Copies of this journal are obtainable at all Branches and Agencies of the Central News Agency, Ltd., at all News Agents and Railway Bookstalls throughout South Africa, and at the London Agency as above.

**NOTICE.**—The postage of this issue of the *S.A. Mining Journal* is: South Africa, 1d. All other parts, 2d.

CONTENTS.	PAGE
Notes and News	367
Topics of the Week:	
The Development of Mining	369
New Construction Work on the Rand	370
Phthisis Prevention: Government Mining Engineer's Important Invention	371
Correspondence and Discussion: "An Advisory Board"	371
Rand Lives, Profits, Dividends, and Yields	372
Progress of Graphite Production in Madagascar	373
South African Mining Dividends in 1917	374
Miners' Grievances at Randfontein	375
Metallurgical Problems of the Rand—II.	376
The Year with the General Mining Subsidiaries	377
Answers to Correspondents	378
The May Gold Output in Detail	379
The Week in the Sharemarket	381
The Week in the Mining Material and Engineering Trades	383
Company Meetings: Anglo-French Exploration; Standard Bank of S.A.; Union Tin; Modder Deep Levels; East Rand Proprietary Mines; Witwatersrand Townships	389

## Notes and News.

The board of directors of the New Kleintfontein Company have decided, after full consideration, not to pay a dividend in June. It is estimated that on June 30, after providing for current liabilities, the company will have a cash deficit of £20,000. This does not include floating assets not immediately realisable, £108,000 of which is in stores and £88,000 of such heavy stock is necessitated by war conditions. The native labour position is unsatisfactory, and indications are that it will not improve for some time to come. If present profits are maintained the board anticipates paying a dividend in December.

\* \* \* \* \*

A satisfactory improvement is disclosed in the report of the Elandslaagte Collieries, Ltd., for 1916, the company having made a marked recovery from the adverse position it was in at the end of the previous year consequent on loss of business mainly due to the war. The output for 1916, at 67,868 tons, compares with 53,554 tons for the previous period, and whereas the transactions of the company during 1915 resulted in a loss of £1,436, a profit is shown for 1916 of £6,941. This amount, with the balance brought forward from the previous year, made a total of £8,389, from which sum £2,189 has been written off in respect of depreciation and bad and doubtful assets, leaving £6,200 available for appropriation. A dividend of 2½ per cent. was declared, absorbing £3,930, and after making provision for income tax and directors' fees, there remains a balance to be carried forward of £1,694, against £1,449 brought in. The report states that the very favourable results of the past year's business are due to new trade, more economical working, and improved prices realised. The prospects for the current year, based upon contracts in hand and the returns for the first two months, warrant the expectation of results which will enable the directors to declare a more substantial dividend this year.

\* \* \* \* \*

The U.S. Geological Survey has recently published a report on the use of the divining rod, often called "The Divining Rod." In tracing "witching" or "dowsing" the history of the subject it is found that divining rods have been used to locate ore deposits, to trace the courses of underground streams, and for numerous other purposes. What is believed to be the first published description of the rod is contained in Agricola's "De Re Metallica," published in 1556. Before the war there were several societies in Germany whose sole object was said to be the study of the divining rod, and in 1910 the Department of Agriculture of France appointed a committee to investigate the subject. The subject was briefly dealt with in a presidential address at the Institution of Civil Engineers in London a few years ago, and one of the learned societies in England published a whole volume of experiences with the rod.

\* \* \* \* \*

The report of the Kolmanskop Diamond Mining Company for the year ending December 31 last states that mining operations were resumed in the early part of January, 1916, and although labouring under a restricted output, a quantity of 12,426 carats was produced. In December the authorities granted permission for an increased output of 5,840 carats per month. Difficulty experienced in obtaining native labour rendered it impossible to produce this quantity of diamonds, but the directors hope that this trouble will soon be overcome. The company's plant and buildings have been placed in proper repair; difficulty is, however, being experienced in obtaining spare parts of machinery for use in case of a breakdown of the plant. The diamonds produced during the year have been taken into account at 25s. per carat, this being considerably below the value placed upon them by Mr. Van Beek, the

Valuator appointed by the Government, which averages over 30s. per carat. The report adds "The diamonds won, although sent to London for sale, have not yet been disposed of. The delay in sale is, we are given to understand, due to political reasons, and it is quite uncertain as to when anything definite will be done in the matter." The Minister of Mines announced in the Union Parliament recently that the tender of the London Diamond Syndicate was recently accepted for South West stones. The report shows £15,053 to the credit of profit and loss account.

\* \* \* \*

A decidedly cheerful showing is made by the record of prices compiled by the *Bankers' Magazine* for the four weeks ended April 21. There was a net increase of £13,628,000, or 1·6 per cent., in the valuation of the £2,669,377,000 of securities as recorded on 20th March. The advance has been facilitated by the progress made on the western front, the entry of the United States into the war arena and the reduction in the bank rate. With only three exceptions, these being American Railroad bonds, Brewery stocks and South African mines, every class of security listed by the magazine shows an improvement.

\* \* \* \*

That well-known German paper, the *Frankfurter Zeitung*, had a series of articles a little time back on "England's Financial British Industry. Supremacy," the effect of the war thereon, and Germany's prospect of inheriting some of the wreckage which, according to our enemy critic, was all that would be left of it before the war was over. These articles have been translated into English, and are now published in a small volume by Messrs. Macmillan, with the titled indicated. The most interesting thing in the book is this critic's opinion of how England won her financial supremacy. He sums up the causes thus: "The influence of history, a mighty Empire, a cosmopolitan Stock Exchange, intimate business connections throughout the whole world, cheap money, a free gold market, steady exchanges, an almost unlimited market for capital, and an excellent credit system, an elastic system of company legislation, a model insurance organisation, and the help of the Germans: these are the factors that have created England's financial supremacy. Perhaps we have omitted one other factor, the errors and omissions of other nations." Commenting on this passage, the London *Economist* of April 21 last says: "There is yet another item in the list, and that is our English reputation for fair dealing and promptitude in settlement, acknowledged in another passage by this very critic. All these advantages, except one, that we had before the war, we shall have, if we set to work in the right way, after it, some of them to a less extent absolutely, but little if at all less relatively compared with any of our pre-war rivals, with the sole exception of the United States. The one item on the list that we shall have lost is the help of the Germans, which our German critic was fully entitled to italicise. It is a weakness of Germany's, arising from her bad political atmosphere and mistaken outlook on life, that the best Germans—those with any craving for freedom and civilisation—have marked their sense of these things by leaving her shores. Many of them have come here and done us excellent service in developing our trade and finance. Very wisely we have welcomed them, and made good use of them to their advantage and ours. Some of them have been here for generations and are amongst our best citizens, and are treated as such. Their help we shall keep. Some, of later arrival, have been treated during the war in a manner which we shall some day regret, owing to our natural exasperation against the barbarities for which they had no responsibility whatever, committed by their countrymen during the war. These barbarities have caused bitterness which it may take generations to allay. In the mean time, if we shall have to forego German help in industry and finance, the war has brightened us up wonderfully, teaching us to do many things much better than we ever did before, above all, to work harder and more carefully, and to spend less on ourselves."

The Cornish correspondent of the *Mining World* writes:—

**Yankees and British Tin Smelters.** "The official announcement made by the National Lead Company of the United States as to its purchase of one-half the capital stock of Williams Harvey & Co. has not created surprise in Cornish circles;

in fact, it seems rather to have been expected. Messrs. Williams Harvey & Co. have plants at Hayle, Cornwall, and at Liverpool, and now it is proposed to erect a smelting plant in the United States, which will work in conjunction with the English company. The National Lead Company states that it spends \$10,000,000 a year in tin, which it markets in various forms, such as solder, type metals, tin piping, etc. One object of the fusion is to capture the Bolivian tin trade. The company claims to have secured the best smelting talent in Europe, and also an immediate connection with the tin-ore producers on the West Coast of America." Our contemporary suggests editorially that the above deal may mean the transfer of a good deal of British tin influence to the United States, which already dominate the copper market. There is, however, no output of tin from the United States, which is somewhat remarkable considering the extent of territory and the enterprise of the population by which that territory is inhabited. Nature, which has been prodigal in her gifts to the United States in other respects, has bestowed no tin deposits upon them.

\* \* \* \*

A recalculation of the Lonsdale ore reserves at December gives 145,261 tons, valued at 20·06 dwts.

**Improvement at the Lonsdale.** This quantity shows an increase of 7,535 tons, due to stoping widths below the 13th level being calculated on reef width plus 24 in. this quarter instead of on reef width plus 12 in. Presumably the greater width will not be continued when the character of the ground changes, for the inclusion of an extra 12 in. was necessitated by the soft clayey schist on the footwall below the 13th level being slightly wider than above the 13th, and by the fact that it is found that in stoping below No. 13 it is impossible to prevent this schist from breaking away and mixing with ore. The increase in the gold contents is due to the very high value of the ore met with in the 17th level, where the average reduced value of the rock exposed at the end of the quarter was 94·5 dwts. over a width of 24 in. for 321 ft. driven. Presumably the information published on March 13 is subsequent to the figures contained in the quarterly report, for on the 17th level north the reef now appears to have cut out, while towards the south it has become unpayable. In any case, there is an excellent stretch of reef.

\* \* \*

The question of water power as a competitor with coal will assume in the near future an increased Coal Supplies v. interest, owing to the rapid developments Water Power. now taking place throughout the Empire.

Particulars are given in the recently issued Report of the Dominions Royal Commission of the water powers of the Dominions, especially of Canada and New Zealand. Those powers are great, and as they provide a cheap, convenient, cleanly, and inexhaustible form of energy, their potentialities in respect of industrial development are immense. In regard to the Union of South Africa, however, the report says: The machinery at the Lydenburg and Barberton gold fields is, for the most part, driven by electric power derived from local waterfalls, but the extent of this development is small. It is also possible to produce electric energy at various points on the Vaal and Orange rivers and the Moi rivers of Natal and the Transvaal. These may be made available to a moderate extent for industrial expansion, but it cannot be said that any development of importance has been made, or is likely to be made, in the early future. Whether the day will come when it will be possible to harness the waters of the Zambesi at the Victoria Falls, and convey power for industrial use, is a fascinating speculation, but with the abundant supply of cheap coal in the Transvaal and Natal, accessible from all points, the scheme is not likely to be carried out for mining or industrial purposes in the Union."

According to the Gatooma paper, some time ago the mechanics on the Cam and Motor **Cam and Motor Labour Troubles** approached Mr. McDermott, the general manager, on the subject of hours and wages. They were told the time was inopportune and that if they persisted in their demands he would have to close down the mine. Before Mr. McDermott left he asked the men to send in their petition, which he then passed on to his successor, Mr. R. Allen, to deal with. Last week the men pressed for a reply to their demands, and the manager told them he could not grant them, and if they were dissatisfied they could get their cheques. About fourteen of them did so, and left the property. We understand their places are being gradually filled and the work on the mine has so far suffered no interruption. In some cases applications have been received for reinstatement.

\* \* \* \*

The special meeting of the Oceana Development Co., Ltd., in January approved a provisional agreement for granting an option, and in mail week a circular by the company was issued, stating that boring operations on the two farms will be forthwith entered into, the contract having been arranged with Mr. G. R. Bonnard, who has for some time been associated with the Amalgamated Properties of Rhodesia Company. This agreement binds the contractor to expend within a specified period at least £10,000 upon boring and other mining work, and to bore to a depth of not less than 3,500 feet, unless a payable gold reef is intersected at a lesser depth. The contractor is granted the right for two years to purchase the gold-mining rights pertaining to the two farms. If this option be exercised, the contractor has to form a mining company for that purpose with an initial capital of £600,000, whereof £200,000 would be working capital, £200,000 would be allotted to the contractor, and £200,000 to the Oceana Development Company in fully-paid shares. Of the £200,000 cash working capital, half will be guaranteed by the contractors, and half will be under option to the Development Company. In case more capital be required, it will be provided that future issues of capital of the mining company will first be offered to its then existing shareholders at par. The total area is 15,534 acres. Of such area, mynaecht and discoverers' claims should give an actual mining area of about 2,250 mining claims. The circular calls attention to the fact that the Van Ryn reef has been intersected at 2,400 feet depth in farm Spaarwater, which lies between the Nigel and the Oceana Company's two farms. Of course until bores intersect reef on this new mining area nothing can be said as to possibilities or probabilities, and the time has not yet come to consider the adequacy of the £200,000 working capital to be put up, but of an authorised £600,000 of capital no less than £400,000 is to form the purchase consideration for the rights acquired if the company be formed.

\* \* \* \*

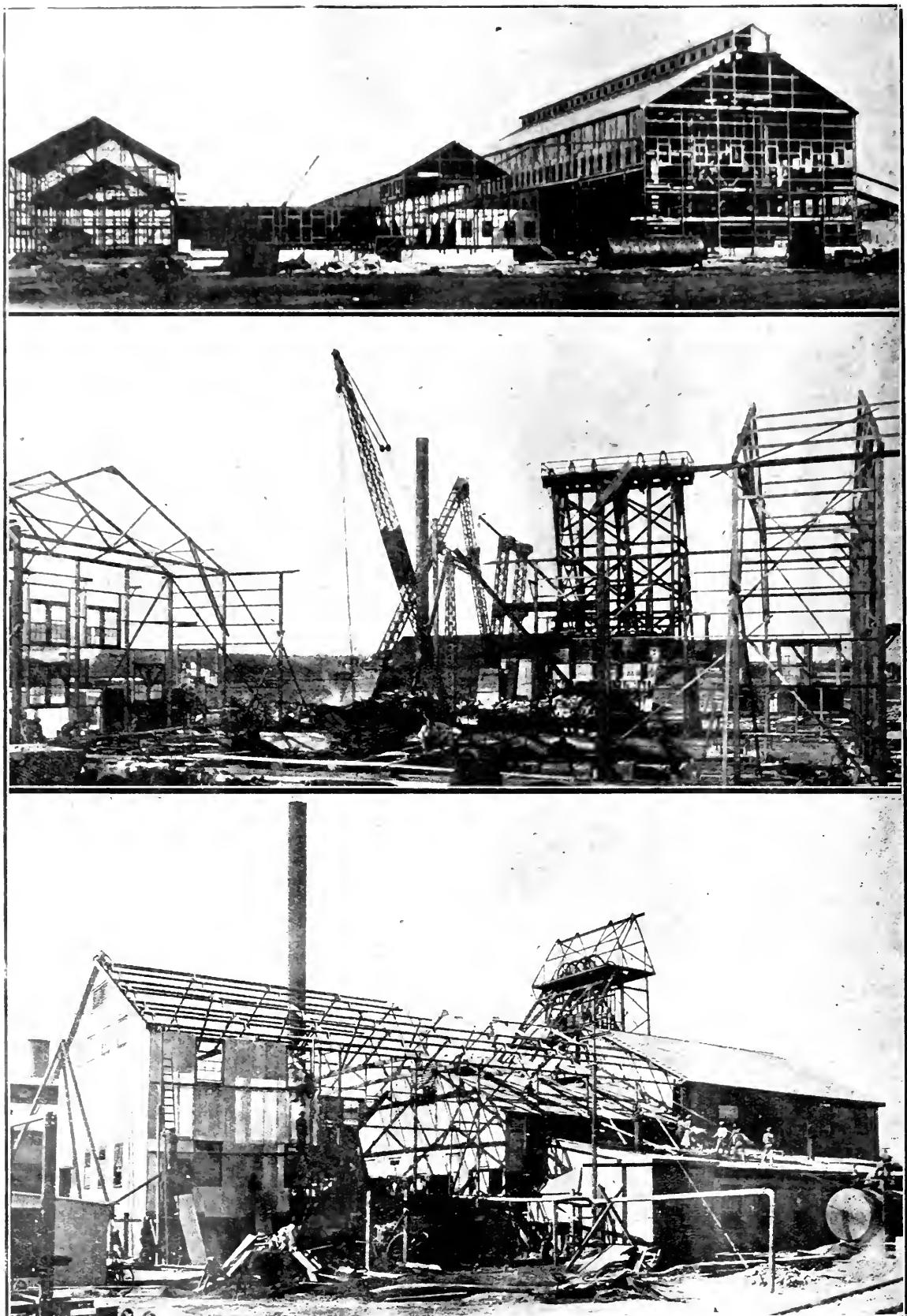
According to the annual report of the Rhodesian Mines Department for 1916, the number of producers of gold in that territory was 494, of which 476 were reef and 18 alluvial producers. The total gold production was 930,356 ozs., valued at £3,895,311, as against 915,029 ozs., valued at £3,823,168, so an increase of 15,327 ozs., and value £72,143, may be recorded, which, under the circumstances, may be considered satisfactory. The local price obtained per standard ounce still remained at only 76s. The principal producers were the Shama mine, with 106,092 ozs.; the Globe and Phoenix, 104,701 ozs.; the Cam and Motor, 49,551 ozs.; the Lonely, 41,552 ozs.; and the Falcon, 34,425 ozs., and these five mines produced over 36 per cent. of the total output. Twelve other mines produced more than 10,000 ozs. of gold during the year, so that seventeen mines accounted for 568,139 ozs., or 61 per cent. of the total gold output. The larger producers, therefore, accounted for the greater part of the gold produced, but the small workers spread over the country thoroughly prospect the value of the reefs and are of the greatest value to the country in opening up and developing claims prior to more extensive work on properties which promise good returns.

## TOPICS OF THE WEEK.

### THE DEVELOPMENT OF MINING.

SEVERAL factors have combined of late to draw attention to the need for the further development of the mineral resources of the Union. First we have the Dominions Royal Commission—the South African member of which we welcome back this week—in its final report issued recently, advocating an Imperial Resources Development Board, which, as its name implies, would have for its object the investigation and encouragement of the undoubtedly enormous untapped mineral possibilities of all the Dominions. Then we have the example of the Imperial Government in appointing a Mining Development Board for the United Kingdom, which has for its object the development of the mineral resources, other than coal and iron, in those countries. It is significant that the Chairman of that Board is Sir Lionel Phillips, and its personnel includes several engineers well-known in South Africa. It is argued here, and not unreasonably it seems to us, that if scope and use for such a body can be found in the United Kingdom, the mineral possibilities of which are comparatively well known and prospected, all the greater would be the utility of a similar body in this country. Gold and coal, of course, take the place of iron and coal in the case of South Africa; and the reference to any public body created to develop our mineral resources would, doubtless, exclude in our case the former minerals. The whole subject, however, suffers from a want of consideration, resulting in a noticeable lack of definiteness among those who are most anxious to get something in this direction done. Only last week we ourselves were reproached by the Chairman of De Beers for devoting our space too generously to the problems of the gold industry, to the exclusion of the other and smaller mining activities of the whole Union, such as coal, iron, copper, and tin. After all, gold mining does to-day carry the country on its back; and however great the prospects of the other branches of mining may be for the future, it is with the present we are all mainly concerned. At the same time, it behoves us all to look ahead; and it is exercising merely the simplest form of foresight to strive to encourage the investment of capital in the exploitation of the dormant minerals of the country. That such an attitude is called for was demonstrated very clearly by Mr. J. M. Buckland, the President of the South African National Union, in a speech to that body last week. Mr. Buckland showed that capital in this country is strangely shy of embarking on any form of industry that lies outside the more beaten and familiar tracks of enterprise. On the other hand, we have people prominent in the gold mining industry declaring that the first and most clamant duty of the Government is to put the gold mining industry in the way of realising to the full its enormous possibilities. Here, again, an advisory board is suggested, and a correspondent in this issue puts the case for it very forcibly. Nor are the coal mining people a whit less downright in expressing dissatisfaction with the whole treatment of their industry at the hands of a dilatory and procrastinating bureaucracy. The whole position, therefore, may be summed up somewhat as follows: The people interested in the areas on the fringe of the present producing gold mines—particularly on the Far East Rand—declare they want an advisory board to aid and "jog the elbow of" the responsible Minister and the Mines Department in the matter of facilitating the development of those areas. Again, the people who are not directly interested in gold mining at all are equally insistent on the need of some similar public body to develop the minerals of the country other than gold, since the latter, in their opinion, is considered to the exclusion of everything else. None of the existing public bodies, such as the Advisory Industrial Board or the Research Committee, seems to meet the needs of the dissatisfied, though it might possibly be different were the public vouchsafed more information regarding the silent activities of those doubtless useful bodies. It is not for us to attempt to solve the difficulty of pleasing everyone in this matter. Our purpose here is achieved if we gather together and reflect the growing body of public opinion, traceable directly to the war, in favour of a more vigorous development of all the mineral resources of the Union in co-ordination with those of the rest of the British Empire.

## NEW CONSTRUCTION WORK ON THE RAND.



1.—NEW MODDER NEW MILL. 2.—NEW SEVEN-COMPARTMENT SHAFT AT ROBINSON DEEP.  
3.—NEW COMPRESSOR STATION, NO. 4 SHAFT, STATE MINES

## PHTHISIS PREVENTION: GOVERNMENT MINING ENGINEER'S IMPORTANT INVENTION.

### Detailed Description of the "Konimeter."

ONE of the most important factors in the fight against phthisis is the accurate investigation of the amount and character of dust in the mine air. What this involves may be realised when it is stated that the dust which causes phthisis is not the coarse dust, nor even the dust which appears fine to the sight, but dust so small as to be invisible unless present in large quantity. This is technically described as dust below 5 mikrons in diameter, which means that 5,000 such particles could be put side by side within the length of an inch. To the problem of counting these fine particles, Mr. Kotzé, the Government Mining Engineer, has devoted considerable time and thought. After experimenting with photometric methods, he, in September, 1916, produced a mechanical collector to which the name "Konimeter" has been given. This was tested, in comparison with other dust estimating means, by Dr. Moir, who reported on the 11th December that the device gave satisfactory results. In November and January the device was submitted to the Miners' Phthisis Prevention Committee. Being approved by this Committee, it has been finally passed on to the Phthisis Committee of the Transvaal Chamber of Mines, with the object of dedicating it for the free use of the mines of the Union.

#### THE "KONIMETER" DESCRIBED.

The "Konimeter" in its present form comprises an aluminium casting about five inches long, in which is mounted the barrel of a small air suction pump. The suction end of the barrel communicates with a shallow chamber formed on the side of the casting. This chamber has one open side which in use is closed air-tight by means of a glass microscope slide which is removably held in place by a spring. Communication between the chamber and the external atmosphere is made by a small nozzle positioned

at right angles and close to the glass plate. The air pump piston is fitted with a cup leather packing so directed as to cause air to be drawn into the barrel when the piston is raised. The end of the barrel is so shaped as to eliminate dead space when the piston is fully depressed. The raising of the piston is effected by a spring. In order to make a suction stroke, the piston is pressed fully down and is so retained by a trigger. Upon releasing the trigger the piston is forced up by the spring until it comes in contact with a stop, so that a definite volume of air is collected at each suction stroke.

#### HOW THE DUST PARTICLES ARE COUNTED.

Before being placed in position the glass slide is coated with a sticky substance, usually vaseline. Upon the piston making a suction stroke it tends to exhaust the air from the slide chamber. The external air accordingly flows through the nozzle, and, impinging as a jet on the sticky surface of the slide, deposits its contained dust as a round spot on such surface. The strength of the spring and the size of the nozzle are such that the jet of air impinges on the slide at the rate of 40 metres per second. After removal of the slide the dust particles in the spot are counted with the aid of a microscope provided with an eye-piece micrometer, consisting of a piece of glass ruled into small squares to facilitate counting. The number so obtained, compared with the known volume of air passed into the pump, gives the number of particles per unit volume of the air tested. One glass slide can be utilised for taking a considerable number of samples, as the spots of dust are small. After the samples are taken, the slide is transferred to a specially designed dust-proof carrier for safe transport to the surface. If necessary, however, the slide can be immediately examined underground by means of a portable hand microscope.

## CORRESPONDENCE AND DISCUSSION.

### An Advisory Mining Board.

To the Editor, *South African Mining Journal*.

Sir,—Although the mining areas that are computed to contain some four hundred and fifty million pounds worth of gold are to be dealt with, it only means about ten years' life to the gold industry. During the past ten years the tendency of the Rand has been to increase in the Far East only. There are those that feel that this great Rand extends for far greater distances than at present discovered, but it is contended that the present system of claim licences debars men from carrying out prospecting that might lead to the discovery of mines that would carry on the life of the industry indefinitely. There does not appear to me to be that desire in this country to develop minerals that there is in other parts of the world, and although it is stated that there are enormous deposits of iron ore and that copper and other minerals exist, there is no proper channel or system of investigating and dealing with any of these matters. It has been found necessary in Great Britain to form an Advisory Board to go into these questions of mineral development, and I would submit that it would be the very thing for this country and should aid the men desirous of developing gold and other minerals. As the houses seem sufficiently occupied with their present mines and the leases to be acquired, the Board might be composed of gentlemen, not connected with the houses, and Government officials *ex officio*. If this were done it is most probable

that numerous discoveries would be brought before them and by changing conditions that are at present precluding men from prospecting, great changes may take place in this country's mining development.—Yours, etc.,

W. P. TAYLOR.

With reference to the proposed water and irrigation works in Capetown, it is announced in the *Official Gazette* of the Province of the Cape of Good Hope, that the voters of the city were to be asked to sanction the raising of a sum of £268,000 for defraying the cost of the following: The provision of a new reservoir of 200,000,000 gallons capacity in the Silvermine Valley in the Muizenberg Mountains, by the construction of a concrete dam; the cost of this work is estimated at £205,000; the provision of a line of 12 in. cast iron pipes between Muizenberg and Newlands, at an estimated cost of £35,000; certain investigations in regard to water supply, at an estimated cost of £15,000; the provision of buildings, fittings, cleaning, drying, and curing areas, water, drainage, sanitary conveniences, etc., required at the new fishing harbour, at an estimated cost of £13,000.

### MINING EXAMINATIONS.

Study for Certificates as Mine Captains, Mine Managers, Surveyors, Mechanical and Electrical Engineers, and Engine Drivers. Private Tuition and Correspondence Lessons, where personal tuition is impracticable. Practical Mathematics and Electrotechnics. E. J. MOYNIHAN, Consulting Engineer, Cutbush's Buildings, corner of Eloff and Pritchard Streets, Johannesburg, P.O. Box 2061.



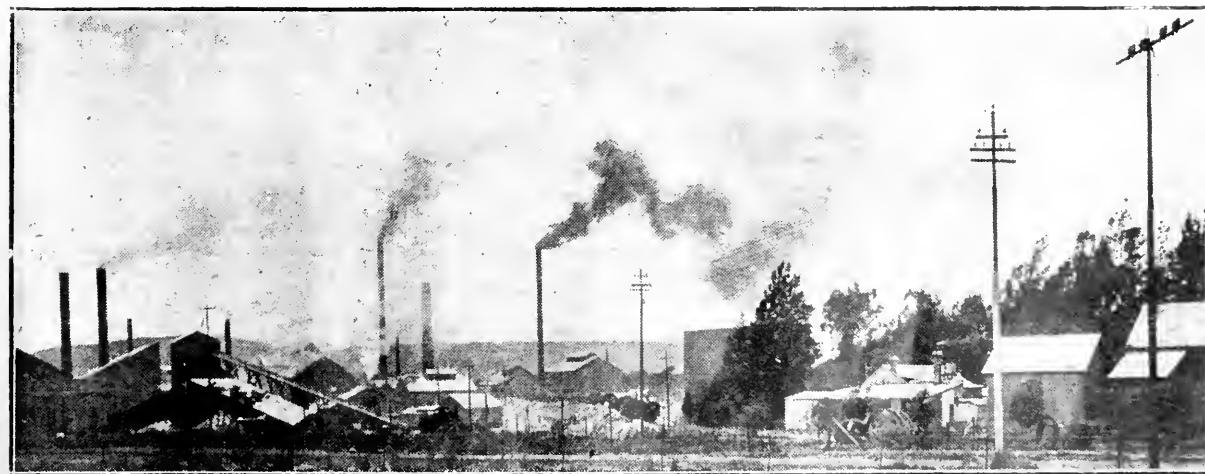
## PROGRESS OF GRAPHITE PRODUCTION IN MADAGASCAR.

[FROM A CORRESPONDENT.]

UNTIL the year 1913 the bulk of the flake graphite of the world came from Ceylon, the output from that island being from thirty to forty thousand tons per annum, other countries figuring for a very small amount for flake graphite, but showing a large output of amorphous graphite, which is of very much lower value. In 1907 Madagascar produced eight tons of flake graphite and slowly increased the output until 1911 when the four figure mark was reached, showing 1,246 tons; in 1913 the yield had gone up to 6,313 tons; in 1915 to 11,851 tons; and in 1916 to the respectable figure of 25,489 tons. The graphite is found plentifully distributed over the crystalline schists of the island, and as these schists occupy about two-thirds of the island, or roughly over an area of 200,000 square miles, some idea of the extent may be imagined. Many thousands of claims have been pegged, and when one takes into consideration that a claim is over 6,000 acres it must be admitted that the supply of graphite appears to be assured. But before jumping to conclusions as to quantities, it might be as well to look carefully into facts. The greater part of these deposits are small, varying from two feet to seven feet in width, and being situated in a country without roads and void of timber it will be almost impossible to work them at a profit once water level has been reached, and this is very often at a depth of fifty feet. The favourite method of working is on the tribute system. Natives get from three to four pounds per ton for the graphite, which may assay from 70 per cent. to 90 per cent. of carbon; if below 80 per cent. the owners generally retreat it. The method pays, but it is wasteful, as half of the graphite is thrown away, either in the tailings or at the mine, as the native tributors choose only the richer portions, throwing all other on to the tips. The system of cleaning the graphite is simple and primitive: the ore is roughly crushed with sticks, and although the schist is soft enough, a great deal escapes crushing and is thrown away in the tailings, and this is often the best flake, which is attached to small pieces of quartz. After crushing, the ore is thrown into a sluice, mostly represented by a hole dug in the earth. From this sluice, after the ore has been well stirred in the water, it flows over the top into a sieve, generally of 40 to 50 mesh, most of the mud going through this sieve. It is, however, put through a second washing, sometimes a third, and is then dried. When thoroughly dry it is again sieved and vanned so as to get rid of any quartz that may be among

the flake. The graphite is then ready for sale to the proprietor of the claim. It may assay only 70 or 75 per cent. If so, it must be re-treated before exporting. Sometimes assays as high as 97 per cent. of carbon, and owners having mines that will show such high analyses are fortunate, as they not only save the expense of re-cleaning but have a quick and ready sale. A few proprietors have established washing and cleaning plants and work principally by machinery, and are rewarded by having a cheaper and cleaner product, besides avoiding a considerable amount of waste, graphite in this case often costing as little as sixteen shillings to produce, instead of four pounds. But although, as I have pointed out above, a great many claims have only small deposits, there are some which have huge quantities. In some cases I have seen a width of ore of over 60 feet and a length of shoot over a mile long. In some cases the incline of the ore body is only 10 degrees, and it then appears as if there are mountains of graphite, as often no footwall is showing, and the ore is opened up for a depth of 150 feet. Exactly how many of these huge deposits exist it is hard to say. It is possible that others will be discovered, but at any rate enough is known to ensure a huge output for many years. These large masses of ore lend themselves to exploitation on a large and cheap scale, and those that are situated either near the coast or near to the railway have an assured life for many years to come, as the ore can be produced and marketed so cheaply as to ensure a profit even if the price should fall considerably. It is noteworthy that on one occasion lately a prospector brought in what he thought were samples of graphite, said samples being found over a length of several miles, but on analysis it proved to be not graphite but molybdenite, and situated close to the coast. The deposit has not yet been opened up, so nothing can be said as to its value. The Government tax on graphite is 8s. per ton, and seeing that good graphite is selling as high as fifty pounds and often above that in Europe, the tax is not exaggerated, though perhaps heavy enough on poor mines. Numbers of claims will assay as high as 35 per cent. of graphite over a width of several yards thick, but not all of this is saved in the treatment as a certain percentage is of so fine a flake as to pass through a 60 mesh sieve. It is then considered useless; at any rate, it is not for the moment saleable. Some lodes yield as high as 20 per cent. of saleable graphite, while others will only yield 3 per cent.

## A FLOURISHING TRANSVAAL INDUSTRY.



PRETORIA PORTLAND CEMENT WORKS, DASPOORT, PRETORIA

## SOUTH AFRICAN MINING DIVIDENDS IN 1917.

Below are recorded the dividends declared during the present year by the South African mining and kindred companies. The particulars include the amount, date of declaration and date of payment of the dividends, the capital on which the dividend is paid and the amount of the distribution, the total amount paid by the various companies, and the amount paid on account of the last fiscal year. Shares are of the denomination of £1 unless otherwise stated:—

Company.	Amount.	Date of declaration.	Date of payment.	When ad.	Capital on which dividend paid.	Amount of distribution.	Total paid per cent. or share.	Total declared for twelve months ended
Anglo French Exploration	2	Mar. 11	April 5	April 13	500,000	50,000	10%	December, 1916 10%
Consolidated Mines Select. (10%)	2 3	Feb. 27	—	—	552,500	124,312	144%	December, 1916 2/3
De Beers Pt. (50%)	20	March	March 15	March 29	2,000,000	800,000	40%	December, 1916 40%
Dundee Coal	1	Jan. 15	March 1	March 14	153,500	7,675	12%	December, 1916 10%
Ferreira Deep	3 6	March 22	May	—	980,000	171,500	593%	September, 1916 38%
Ganka Gold	1	Jan. 18	Feb. 10	Feb. 9	273,495	13,675	52%	June, 1916 12%
Glynn's Lydenburg	2	Jan. 19	March 5	March 29	170,000	17,000	35%	July, 1916 16%
Lonely Reef	2	Jan. 13	Feb. 28	March 14	271,007	27,100	125%	December, 1915 15%
Middelburg Coal	1	Feb. 13	March 7	March 14	99,888	4,994	61%	June, 1916 7%
Do. Pref.	6	Feb.	March 7	March 14	64,899	1,622	—	—
New Geduld Deep (2%)	6	March	—	April 13	30,000	7,500	150%	December, 1916 25%
New Jagersfontein	4	March 26	—	—	850,000	177,000	577%	March, 1917 35%
X. Transvaal Gold Farms (2 6%)	11	Jan. 15	—	—	47,500	2,305	30%	—
New Vaal River Diamonds	1	March 16	March 31	—	168,858	8,443	35%	December, 1916 5%
Premier Transv. Diamonds. Pt. (5%)	6 3	Jan. 11	Feb. 23	Feb. 23	40,000	50,000	—	—
Do.	6 3	April 16	—	—	40,000	50,000	—	—
Selukwe Gold (2 6%)	1/2	April 4	—	—	55,981	3,732	16	March, 1917 1/2
S.A. Gold Trust	1 6	Feb. 1	March 14	March 14	500,000	37,500	557%	December, 1916 7%
Shamva Mines	1 6	March 13	March 31	April 13	600,000	45,000	65%	December, 1916 6%
Transvaal Gold	1	March 23	May	—	604,225	30,211	275%	March, 1917 12%
Twecfontein Collieries	19%	March 22	—	—	60,000	11,400	135%	December, 1916 25%
Do. Pref.	7%	March 22	—	—	75,000	5,250	—	December, 1916 10%
Wankie Coll. (10%)	6	Jan. 18	Jan. 30	Feb. 9	405,236	20,262	—	August, 1916 12%
Do.	6	March 17	March 30	April 13	405,236	20,262	125%	August, 1916 25%
Witbank Colliery	2 6	Feb. 20	April 3	April 13	210,000	26,250	287%	August, 1916 25%
Wolhuter Gold	1 3	April 16	—	—	860,000	53,750	133%	October, 1916 15%

\* Free of Income Tax.

+ Since reconstruction.

## The Position of Small Mines.

During the progress of the debate on the Budget in the House of Assembly, Mr. Jan L. Schurink, M.L.A., member in the Union House for Pilgrims Rest, took advantage of the occasion to speak out on behalf of the small mining concerns, and to emphasise the fact that the heavy costs of working were handicapping them to an excessive extent, and thus affecting the revenue of the country. Speaking thereon, and referring to the remark of the Hon. J. X. Merriman, when dealing with the taxation of mines, who said that he was afraid the goose that laid the golden egg was in danger of being killed, Mr. Schurink voiced the conviction that he did not share that fear as far as the mother goose was concerned, but for the gosling in the shape of the small mines there appeared every sign of extinction. He spoke of the enormous cost of mining requisites, as cyanide, for instance, was 10d. before the war and now figured at 1s. 5d., and went on to quote other mining commodities that had risen considerably since the outbreak of the war. Now these stores were being provided to the large mines at reasonable prices, but the small mines did not share in these concessions, and he appealed to the Minister of Mines to bring to bear his influence to the end that the smaller propositions would also share in these privileges. He went on to say that production of the mining industry outside the Witwatersrand area for 1916 was £1,500,000 out of the total output of £39,000,000, and to the former figure Lydenburg contributed more than half-a-million more than the third of that amount. It must not be forgotten that the profits derived from the smaller ventures remained in the country; as against this a rather large percentage of those of the large mines was spent overseas. Often, in the wills of those self-made millionaires obtained their wealth from the soil of this country. The mining groups displayed a feverish anxiety for the development of the Far East Rand, but his district did not receive this attention, where there were numerous farms locked up to the detriment of the progress of our district. A more liberal Gold Law was urgently required. The initial costs to the small propositions were very heavy, and he considered that claim licences should not be payable until the production stage had been reached, and this matter was recommended by the State Mining Engineer. The tax on profits affected the "small" man unreasonably, as against the larger ventures, and as an instance he quoted the case of two mines—the one run by a company of shareholders, who laboured under ideal conditions, while the other, a privately owned venture, was somewhat handicapped in proof of this Mr. Schurink went on to show that

in the case of the first-named a sum of £4,500 was allocated to wages for some ten white employees, while in the latter case the two owners were denied the right to deduct a sum representing an amount equal to their wages in the form of working costs; thus the small syndicate paid tax on an amount that the larger proposition deducted from their output ere the basis of taxation was arrived at.

## Zaaiplaats Tin.

The results for the month of May, 1917, are as follows: Days run, 28; ore milled, 2,540 short tons; residues retreated, 856 short tons; concentrates won, 36 long tons; average value of concentrates, 69·5 per cent. metallic tin; estimated profit for the month, excluding Government taxes on profits, £262 2s. 4d.; add adjustments in respect of estimated values of previous shipments, £128 19s. 7d.; profit declared for the month, £391 1s. 11d.; capital expenditure, nil. Note.—Revenue for the month has been calculated on the basis of tin at £210 per ton.

## American Railroad Men in Russia.

Rehabilitation of the crippled Russian railway systems by a large corps of trained American railroad men will be the direct and early result of an appeal to President Wilson from several of Russia's ablest engineers. The new Government thus will be strengthened against the pressure to make a separate peace with Germany. Plans to lend the Russian Government some of the new war bond issue already have been formulated, but American aid is to go still further and make effective the expenditure of the great sums of money. One of the greatest causes of Russian inactivity has been the demoralised condition of the transport system, which appears to have broken down at every emergency. To correct this defect, plans are being made to send more than 500 trained American railroad men to Russia to organise and operate her railroads. It is said that millions of dollars' worth of supplies for the army and food for the civil population lie useless in the congestion of the traffic centres, while the Russian railway organisation is demoralised. By coming to the aid of the new Government at this time, it will be strengthened against internal disorder and outside pressure.

## MINERS' GRIEVANCES AT RANDFONTEIN.

At the time of the recent industrial trouble at Randfontein it will be recalled that when the representatives of the company met representatives of the Miners' Union and of the workmen at a round table conference, it was arranged that another meeting should be held when the workmen would be able to submit a list of matters which they wished to discuss. This meeting took place last week at the Public Offices, Krugersdorp, the Magistrate (Mr. L. Bangley) presiding. Messrs. Imroth, Munro, J. C. K. Pollock, W. H. Robinson, D. H. Thacker, J. Crosby and Beatty represented the company; Mr. Roberts, the Chamber of Mines; Mr. J. Forrester Brown (secretary), and Messrs. Williams and Smith (organisers), the South African Mine Workers' Union; and Messrs. Giles, Vaughan, Todd, Prior and a number of others, the workmen. The proceedings were, as on the last occasion, conducted in private, but at the conclusion a statement of what had occurred was communicated to the Press. From this it appeared that Mr. Vaughan, on behalf of the men, submitted the following points for discussion:—

- (1) Increased pay for two skipmen on No. 8 shaft, 15s. to 18s. 4d. One on No. 11 shaft, 15s. to 18s. 4d. One on No. 13 shaft, 12s. 6d. to 16s. 8d. Two on No. 14 shaft, 12s. 6d. to 16s. 8d. One on No. 14 shaft, 15s. to 16s. 8d.
- (2) That no skipmen be allowed to run two sets of skips.
- (3) Where men are asked to do extra work, that the pay received for such extra work shall not be considered when calculating war bonus.
- (4) That all men be paid the war bonus in full according to the agreement between the Chamber of Mines and the Unions.
- (5) That the bonus verbally promised to the stopers on No. 7 shaft, for the months of March and April, be paid to those who earned same.
- (6) That all day's pay men be paid 5s. per foot for developing work outside their working place.
- (7) That all stopers or other men be paid extra for any work done outside their stope or ordinary recognised working place.
- (8) That no gangs of boys, pipefitting, etc., be allowed to work unless directly in charge of a white overseer.
- (9) That no shift bosses be allowed to be directly in charge of gangs of boys.
- (10) That the practice of one man attending to two classes of work be discontinued.
- (11) That where developers are asked to do extra work in drives, etc., they receive extra pay for same.
- (12) That contractors be paid 10s. per foot for raises.
- (13) That where contractors are compelled to use inferior explosives, a reasonable reduction in the price of same be made.
- (14) That a footage sheet, signed by the surveyor, be supplied to the men working under the bonus system.
- (15) That a secure shed be provided for the bicycles of the men on No. 9 shaft.
- (16) That bonus money be paid on the first pay day after measurement.
- (17) That the Benefit Society be run on democratic lines.
- (18) That where an old employee has left or been fired on one shaft and re-starts on another, the practice of compelling him to sign on at 16s. 8d. be discontinued.
- (19) That Banksman De Wet, on No. 6 shaft, be advised to join the Union, or be removed, and the principle involved herein to be generally recognised on the Estates.

### FOR SALE.

**Tangye Driving Engine** (10 x 20). Practically new, done very little work. Price £90 f.o.r. Brakpan.  
Phone 78. CHAMPION & KIMBLE, Brakpan.

(20) That facilities be granted to our branch secretary on the reduction works to collect members' subscriptions and transact other necessary business.

(21) That the prices of the developers on No. 3 and 4 shafts be increased.

(22) That the advisability of supplying all underground workers with hot coffee when coming off shift be taken into serious consideration.

To this list was added by the men three further demands, these being:—

1. That the system of paying on the basis of 16s. 8d. guarantee and bonus be abandoned.

2. That ten men working on the basis of 16s. 8d. guarantee and bonus be dismissed.

3. That a certain man who had been dismissed the previous day be reinstated and get paid for that day (Friday).

The representatives of the company, after going through the list handed in, pointed out that item 10 somewhat conflicted with Nos. 6 and 7, and that the shed required by No. 15 had already been erected. They agreed to items 4, 13 and 22 and proposed that the other points be held over for discussion. The representatives of the men then wanted the additional items numbered 1 and 2 considered before dealing with the others. A lengthy discussion took place, and the men finally retired to consider whether they would waive the additional demand numbered 2. On resuming their spokesman announced that they were prepared to waive additional demand numbered 2 subject to certain provisos, but that they required an answer to additional demand numbered 1 within 24 hours. To this the representatives of the company replied that they were unable to promise an answer before Wednesday.

On Wednesday it was officially notified that the demands of the delegates were submitted to the Executive of the Chamber of Mines at the meeting held on Monday, when the company—Randfontein Estates—was recommended to inform its employees that the Chamber finds it difficult to express an opinion on this subject as it has not heard both sides of the question, which in principle is one mainly for the company. In regard to the first additional demand, the board of directors has agreed to abandon the 16s. 8d. contract guarantee and bonus, and has decided not to entertain any alternative system of contracts for the present. In regard to the question of the ten men, these men have all voluntarily agreed to surrender their contracts, which have accordingly been cancelled, and this point is therefore decided. It is considered highly desirable that the other 22 demands be discussed at an early date, and the conference was adjourned till Friday. A report of the result of the adjourned conference will appear in our next issue.

### Hartz River Discoveries.

We learn that about £50,000 monthly is now being won from the new rushes on the west, and the diamonds are of fine quality. Modern methods are brought to bear, with most profitable results in many instances.

After a brief illness, Mr. John Yendell, a director of the Zaaiplaats Tin Co., Ltd., died at Pretoria last week.

### WANTED

**Thirty Subscribers** of Thirty Pounds each to work a highly payable Diamond Deposit, which will yield high remunerative returns. No Vendors' or Administrators' Shares.—Alfred Lewis, c/o S.A. Mining Journal.

## METALLURGICAL PROBLEMS OF THE RAND.—II.

[By H. FOSTER BAIN.]\*

## GRADE OF ORE

The second impression is that, as matters go elsewhere in the world, the grade of the ore is fair rather than particularly low. The average for the companies reporting in 1915 was 6.18 dwts. per ton. The number of companies working upon ore of various grades is indicated below: At 4 dwts. per ton, 1 mines; from 4 to 5 dwts. per ton, 10; from 5 to 6 dwts. per ton, 17; from 6 to 7 dwts. per ton, 10; from 7 to 8 dwts. per ton, 3; from 8 to 9 dwts. per ton, 5; from 9 to 10 dwts. per ton, 3; over 10 dwts. per ton, 1. The lowest yield was that of the Gileneair Main Reef, 3.27 dwts., and the highest the Meyer and Charlton, 10.85 dwts. Both are relatively small producers, milling 251,610 and 176,110 tons respectively. The average grade and tonnage at the four largest mines in 1915 was as below: Crown, 2,497,000 tons milled, at 6.11 dwts. per ton; Randfontein, 2,146,520 tons milled, at 5.52 dwts. per ton; East Rand Proprietary, 1,983,600 tons milled, at 6.19 dwts. per ton; Knights Deep, 1,217,950 tons milled, at 3.61 dwts. per ton. How these figures compare with a few large producers elsewhere is indicated below: Homestake, \$4.09; Alaska Treadwell, \$2.41; Alaska Mexican, \$2.62; Alaska United, \$2.07; Mother Lode, California, \$5.48; Dome, Ontario, \$4.80; Alaska Juneau, \$2.00; Alaska Gastineau, \$1.25; Lake Superior copper mines, \$2.50. The dollar is worth a trifle less than a pennyweight, but the comparison is sufficiently close for such general purposes as such figures serve. In the case of the Rand mines the figures represent the yield per ton, as is also true of the Lake Superior copper mines. The others represent the gross value per ton milled except as stated. So far as the value of the ore is concerned the Rand can hardly claim pre-eminence as a low-grade district.

## CHARACTER OF ORE.

A third impression is made by the relative simplicity of the ore. There is no problem of refractory ores such as metallurgists elsewhere have so commonly to overcome; along the whole of the Rand there is no smelter—that last resort of the metallurgist who has to treat sulphides, arsenides, tellurides, antimonides, or other mixtures that refuse to give up their gold to mercury or cyanide. The gold in the basket can be saved by the methods in use, amalgamation and cyanidation. The limit of recovery is an economic one; it is determined by the cost of crushing and after-treatment. If I may discriminate, I should say that the local technology is simple, it is the introduction and realization of economies that demand thought and command the admiration of the visitor. In his introductory chapter to "Rand Metallurgical Practice," Stokes has given the following as representative of surface costs on the Rand: Sorting out waste, 3d., or 6 cents; preliminary breaking, 3d., or 6 cents; transport of ore and waste, 2d., or 4 cents; stamp-milling, 1s. 6d., or 36 cents; tube-milling, 7d., or 14 cents; cyaniding, including filling, conveying, and discharging sand (65 per cent. pulp), 1s. 2d., or 28 cents; slime (35 per cent. of pulp), 6d., or 12 cents; total, 4s. 5d., or \$1.06.

These figures do not include general and head office expenses, which are stated separately and amount to 1s. 6d., or 36 cents per ton. Cuddecoff gives the following as the average cost of treating 3,387,000 tons of ore by four companies controlled by the Consolidated Gold Fields Company in 1913: Transport of ore, 2.773d. per ton; breaking and sorting, 3.258d. per ton; stamp milling, 10.512d. per ton; tube milling, 8.340d. per ton; sand treatment, 9.118d. per ton; slime treatment, 5.988d. per ton; total, 3s. 3.984d., or \$0.89 per ton. While comparisons, from one district to another, are of questionable value, because of difference in conditions and in methods of stating results, the following costs of treatment at mines in other countries may be cited. In each case the mines yield gold ores and the process is either one of amalgamation followed by cyanidation or by concentration with some form of after-treatment. Except as indicated, the costs are quoted from "Mining Costs of the World," by E. N. Skinner and H. R. Plate. The Homestake mine in South Dakota in 1915 treated 1,573,822 tons of ore by amalgamation and cyanidation, employing 1,020 stamps. The company publishes its costs in unusual form and in order to get at milling costs per ton it is necessary to work back from tonnage and total charges. On this basis the total cost amounts to about 44.3 cents per ton, the items being as below: Milling, 24.25 cents; re-grinding, 0.81 cents; sand treatment, leaching (in tanks), 10.81 cents; slime leaching (in filter presses), 8.42 cents; total, 44.29 cents. These figures represent costs per ton milled. In a careful review of Homestake metallurgy, Allen J. Clark gives the following as the cost of each stage of the process, based on the tonnage treated at that stage: Stamp milling, 24.25 cents; re-grinding, 12.64 cents; sand treatment, 17.72 cents; slime treatment, 18.38 cents. The summation of these is not the cost per ton, for which figure the 44.3 cents already derived is more nearly correct. If a complete distribution of general expense were made, the total would be slightly increased. At the Homestake white men only are employed and, as on the Rand, all the material passing the amalgamation plates is cyanided. The Treadwell group includes four mines, dropping 960 stamps in all. Only white labour is employed. Amalgamation is followed by concentration and cyanidation of the concentrate. According to the report of P. R. Bradley for 1915, the total cost of treatment ranged from 37.58 to 41.39 cents per ton. The details for the properties were as below, stated in cents per ton:

	Alaska Mexican.	Alaska Treadwell.	Ready Bullion.	700-ft. Claim.
Milling	30.56	31.22	29.32	27.35
Concentrate treatment	9.81	9.34	9.37	9.49
Bullion charge	0.69	0.83	0.87	0.74
Total	41.06	41.39	39.56	37.58

(To be continued.)

\* In the *Mining and Scientific Press*.

P.O. Box 5518. Telephone 2089. Telegrams: "REINSTATE."  
**THE MINING REAL ESTATE AND INSURANCE AGENCY,**  
 Auctioneers, Brokers & General Agents,  
**BETTELHEIM BUILDINGS, SIMMONDS STREET**  
 (Opposite A.B.C. BANK.)

J. E. AZULAY, Manager.  
 Established 1888.

East Rand Claims a  
 Speciality.

Barnato Shares bought and carried with a 20% margin. Other Stocks according to value. Mines and ore of every description bought. Properties financed. Reports from well known mining engineers furnished.

## BAR IRON AND STEEL

DUNSWART and IMPORTED.

## COPPER AND BRASS

SHEETS, RODS and TUBES.

Biggest Stocks and Lowest Quotations in Town.

**M. BROWN, 180, MAIN STREET,**  
**JOHANNESBURG.**

Telephone 5770.

## THE YEAR WITH THE GENERAL MINING SUBSIDIARIES.

### Points from the Annual Reports of the Producing Mines of the Group.

THE annual meetings of the subsidiary companies of the General Mining and Finance Group will be held during the last week of this month. From advance copies of the annual reports of the producing companies for 1916, we take the following:—

#### MEYER AND CHARLTON.

The Meyer and Charlton report shows that two dividends were declared during the year, namely, No. 53 (of 45 per cent.), paid for the half-year ended 30th June, and No. 54 (of 55 per cent.) for the second half-year, payable to shareholders registered at the 31st December. These dividends amount to a total distribution of £200,000 for the year. The total dividends and bonuses paid by the company, aggregating £1,895,308 19s., amount to 1,475 per cent. on the capital issued from time to time. The full mill of 75 stamps ran 343·02 days, and, with accessory tube mills, crushed 170,879 tons of ore, yielding gold to the value of £438,882 12s. 6d., equal to £2 9s. 7·502d. per ton. The working expenditure amounted to £169,193 8s. 8d., or 19s. 1·572d. per ton, leaving a profit on mining of £269,689 3s. 10d. (30s. 5·930d. per ton). The recovery shows an increase of 4s. 4·947d. per ton, and the working costs an increase of 11·529d. per ton as compared with the results for the previous year. The fully developed payable ore reserves at the 31st December last are estimated by the manager at 512,787 mining tons, of an average value of 14·5 dwts. over an average stoping width of 51·3 inches; in addition there were 161,410 mining tons of partially developed ore of an average value of 17·1 dwts. over 47 inches. These reserves have been paid for out of past profits. The working profit of £283,966 0s. 11d. for the year under review creates a new record for this company. The fully developed ore reserves reflect a further increase of 27,541 tons in quantity and 1·94 dwts. in value as compared with the close of the previous year. The partially developed ore reserves show an addition of 114,844 tons.

#### NEW GOCH.

At the New Goch, the profit from mining operations for the past year was £107,115 3s. 11d., and with the addition of sundry revenue amounting to £5,748 1s. 9d., the gross profit totalled £112,863 5s. 8d. This, added to the credit balance of £32,623 16s. 4d., brought forward from the previous year, gives a total credit of £145,487 2s. The mill of 120 stamps ran for 347·572 days, and (with tube mills) crushed 365,000 tons, yielding gold to the value of £355,522 15s. 11d., equal to 19s. 5·768d. per ton. The working costs totalled £248,407 12s. (13s. 7·336d. per ton), leaving a gross profit from mining operations of £107,115 3s. 11d. (5s. 10·432d. per ton). As compared with the previous year, the yield shows an increase of 6·362d. per ton, and the working costs a reduction of 3·703d. per ton milled. The fully-developed payable ore reserves at the 31st December last are estimated by the manager at 404,185 mining tons of an average value of 5·32 dwts., calculated over an average width of 77 inches. In addition, there are 48,099 tons of

partially-developed ore of an estimated value of 4·76 dwts. per ton. There are also 196,063 tons of developed ore of an average value of 2·87 dwts. over 46 inches, which are at present classified as unpayable. The faulted nature of the reefs in the lower levels of the mine, referred to in the previous annual report of the directors, is responsible to a large extent for the reduction in the ore reserves as compared with the end of 1915. Arrangements for the working by the company of 20 claims of the City Deep Company's mining area immediately adjoining the New Goch southern boundary have now been completed. The necessary agreement between the two companies is in course of preparation for signature, and will provide for the mining of the claims for joint account on the basis of the statement made by the Chairman at the annual meeting of Shareholders held in July last.

#### WEST RAND CONSOLIDATED.

At the West Rand Consolidated, the full mill of 100 stamps ran 310·35 days, and (with tube mills) crushed 402,590 tons, yielding gold to the value of £480,154 6s. 8d., equal to 23s. 10·234d. per ton. Working expenditure amounted to £394,177 2s. 8d., or 19s. 6·980d. per ton, leaving a profit from mining operations for the period of £85,977 4s. The payable ore reserves are estimated by the manager at 1,600,000 mining tons, fully developed, of an average assay value of 6·1 dwts. over a stoping width of 50 inches; there are also approximately 404,000 tons of partially developed payable ore of an estimated value of 8·3 dwts. per ton. In addition to these reserves, there is a large tonnage in suspense, of which at least 450,000 tons are estimated to be payable. These figures show a decrease of approximately 90,000 tons of fully and partially-developed payable ore as compared with the reserves at the close of the year, but an increase in average value of about 0·4 dwt. per ton. The estimated payable tonnage is suspense largely exceeds the corresponding figure at the end of 1915. The reduction of £7,553 0s. 4d. in the working profit for the past year as compared with the previous twelve months is almost entirely due to the increased cost of mining supplies and other extraordinary expenditure due to the war. Arrangements are in course of completion for the acquisition, for a nominal consideration, of a portion of the mining area of the West Rand Central G.M. Co., Ltd., with the purpose of utilising certain of the underground workings of that company as a means of developing the isolated block of approximately 20 claims belonging to your company, situate to the west of the northern portion of the main block of the property.

#### ROODEPOORT UNITED.

At the Roodepoort United the profit and loss account shows that the total revenue for the year from all sources amounted to £417,964 19s. 8d., and the operating expenditure to £368,043 1s. 8d., leaving a gross profit of £49,921 18s. During the year an average of 75 stamps ran 321·57 days, and, with tube mills, crushed 412,845 tons of ore, yielding gold, etc., to the value of £411,314 1s. 8d., or 19s. 11·109d. per ton. The working expenditure amounted to £368,043 1s. 8d., equal to 17s. 9·955d. per ton, leaving a gross profit from mining operations of £43,271 3s. (2s. 1·154d. per ton). The payable ore reserves are estimated by the manager at 677,273 mining tons of fully developed ore of an average value of 6·03 dwts. over 46 inches, and 110,776

#### WANTED.—Mine Manager.

Certificated Colliery Manager for the South Rand Colliery, Balfour.

Apply, stating age, experience and salary required, with copies of references, to—V 76, Central News Agency, Johannesburg.

#### BARFORD & Co., Ltd. (Late Bull & Oehman, Ltd.)

Scientific and Mathematical Instrument Department.  
Large Stocks of Theodolites, Levels, Steel Metallic Tapes and General Surveying Apparatus.

REPAIRS of Scientific Instruments a SPECIALITY.  
Phone 1221. 59, Rissik Street, Johannesburg. Box 4040.

tons of partially developed ore valued at 6·87 dwts. over 45 inches. In addition, there are 602,627 tons of fully and partially developed ore for which there is at present insufficient data for definite valuation, but a considerable portion of which is, in the opinion of the manager, likely to prove payable. The fully developed payable reserves reflect a decrease of 13,036 tons, with an increase of 0·13 dwt. in grade as compared with the previous year. The reduction is due to the raising of the limit of payability consequent on the higher scale of working costs now prevailing by reason of the war. Although the operations for the past year have not shown the degree of progress anticipated when issuing the previous annual reports, there has, nevertheless, been a material improvement. The working profit amounted to £13,271 3s., as compared with £17,258 15s. 1d. for the preceding year, and the increase would have been appreciably larger but for the heavy additional cost of stores and other abnormal expenditure consequent on the war, which are estimated by the manager at approximately £31,000 for the period. The development of the Kimberley main section during the year has continued to disclose satisfactory values. Owing, however, to the very large amount of deadwork in the shape of long cosses, which was involved in opening up the lower levels, the ore reserves do not at present reflect the considerable tonnage of good grade ore which will subsequently be developed in this section. The increasing number of new stope faces in this area which will gradually come under attack in the course of the current year will undoubtedly make for better average grade, and therefore tend towards higher profits.

#### AURORA WEST.

At the Aurora West the total revenue for the year amounted to £219,832 2s. 6d. and the working expenditure to £167,783 0s. 9d., leaving a gross profit of £52,049 1s. 9d. After providing for interest on temporary loans, profits tax, war levy and the assessments made on the company by the Government for the Miners' Phthisis Compensation Fund, there was a balance of unappropriated profit amounting to £42,499 19s. 9d. Of this amount the sum of £7,508 3s. 10d. was expended on shaft sinking and additions to machinery and plant, and the balance utilised in the reduction of the liability of the company. The profit is therefore unavailable for distribution, and, following precedent, the directors have applied the amount in writing down the book value of the mine equipment. During the year the full mill of 80 stamps ran for 331·27 days, and crushed 179,410 tons of ore, yielding gold, etc., to the value of £216,961 19s. 1d., or 24s. 2·22d. per ton. The working costs amounted to £167,783 0s. 9d., equal to 18s. 8·43d. per ton milled, leaving a profit on mining operations of £49,178 18s. 4d., or 5s. 5·78d. per ton. As compared with the previous year, the yield shows an increase of 1·702d. per ton, and the working costs a decrease of 5·557d. per ton crushed. The fully developed payable ore reserves at the 31st December last are estimated by the manager at 502,320 mining tons, of an average value of 5·62 dwts. per ton over a width of 41·69 inches. In addition, there are approximately 68,500 tons of partially-developed ore of an estimated value of 5·2 dwts. over 42 inches. Notwithstanding the heavy increase in the cost of mining supplies during the period, the working profit for the past year reflects an increase of £7,967 10s. over that for 1915. The debt due by the company to the General Mining and Finance Corporation, Ltd., has been reduced by £36,207 3s. 10d., and would have shown a still further material diminution but for the necessity, owing to war conditions, of largely increasing the stock of stores on hand.

Box 2127.

Established 1892.

Phone 217.

## GEO. McINNES.

S.W. COR., MARSHALL SQUARE, OPPOSITE CHARGE OFFICE.  
Has the largest and finest stock on the Rand of Electrical Goods imported regularly by every mail from England.



Pittsburgh Steel Company  
Pittsburgh, Pennsylvania, U.S.A.

Manufacturers of  
"PITTSBURGH PERFECT"

## Open Hearth Steel Products

### INCLUDING

Galvanized Wire Bright Nail Wire  
Annealed Wire Bright Hard Wire  
Varnished Wire Bright Soft Wire  
Bolt and Rivet Wire  
Galvanized Barbed Wire  
Wire Nails Fence Staples

Pig Iron, Blooms, Billets, Wire  
Rods, Hard Spring Coil Wire,  
Twisted Cable Wire, Telephone  
Wire, Bale Ties, Steel Hoops, Steel  
Bands, Cotton Ties and Fabricated  
Stock, Poultry and Lawn Fencing.

We are prepared to give PROMPT SERVICE, and solicit  
your inquiries accompanied by complete specifications.

### Address

## PITTSBURGH STEEL COMPANY

EXPORT DEPARTMENT  
EQUITABLE BUILDING

NEW YORK, U.S.A.

Cable Address: "PITTSTEEL"

## ANSWERS TO CORRESPONDENTS.

All enquiries addressed to the Editor must bear the writer's name and full address. We cannot reply to enquiries by letter, but telegrams with replies prepaid will be answered. Correspondents are requested to write their names and pseudonyms distinctly.

"D.H.P." (Kroonstad).—The proceedings at the Scientific Congress at Stellenbosch will be duly reported in our pages.

"Anxious."—(1) 5 per cent. (2) Better consult a stock-broker. There is no reason why you should not be able to sell the shares here.

"A.L."—The matter is dealt with in this issue.

"Steel."—Enquiries are being made.

"I.berg" (Pilgrims Rest).—(1) Very speculative. (2) Study the report in our last issue.

"R.G." (Springs).—Your letter has been forwarded to the Secretaries of the Chamber of Mines.

"Sheba."—Writing re price of mercury, but note in last issue should help.

"V. 8" (P.E.).—Reply duly wired.

**ELECTRIC WELDING CO.,** 20, Joubert Street,  
C/o Fox Street,

Telephone No. 2661.

JOHANNESBURG.

Latest Patent Process for Welding Iron or Steel, Malleable Cast Iron, Manganese Steel and Steel Castings. New Teeth Welded on Steel Gear Wheels without Softening or Distorting the Wheel. Worn Shaft Journals built up to Original Diameter. Torn Keyways Rebuilt, etc. Numerous Crank Shafts Successfully Welded.

## THE MAY GOLD OUTPUT IN DETAIL.

THE Transvaal gold mines produced gold to the extent of 779,385 ozs. in May, of a cash value of £3,310,618, being an increase of 36,607 ozs., or £155,497 on the April return, which, owing to Good Friday, had only 25 working days. The shortage of native labour is being seriously felt. The number of natives on gold mines on the last day of May was 180,168, a decrease of 5,807 on the April figure, which in turn was 4,000 less than the number employed in March. The Randfontein return was affected by the strike of miners during the month on two of the richer sections and the output showed a decrease on the previous month of £9,103. A clean up on the May Consolidated increased the output by £13,928, and the Springs Mines return was £12,819 better than the second month's return. A certain amount of gold was again absorbed by the reduction plant. Considering the continued shortage in the native labour force, the output, taking everything into consideration, must be regarded as highly satisfactory. The following are the totals:—

Total output	779,385 ozs.
Value	£3,310,618
Increase	36,607 ozs.
Value	£155,497
Witwatersrand	753,351 ozs.
Value	£3,200,031
Increase	35,753 ozs.
Value	£151,870
Outside Districts	26,034 ozs.
Value	£110,587
Increase	854 ozs.
Value	£3,627
Stamps	9,525
Increase	20

## COMPANY RETURNS.

	Value.	Increase.	Decrease.
Aurora West	£18,690	£947	—
Bantjes	22,199	1,462	—
Brakpan	98,632	6,779	—
City and Suburban	48,199	7,174	—
City Deep	127,513	—	£21
Cons. Langlaagte	63,363	1,762	—
Cons. Main Reef	45,175	1,874	—
Durban Roodepoort	14,357	140	—
Durban Deep	36,539	13	—
E.R.P.M.	171,230	1,185	—
Ferreira Deep	75,919	—	2,150
Geduld Proprietary	54,201	985	—
Ginsberg	14,124	68	—
Glencairn	13,826	463	—
Government Areas	173,724	11,639	—
Knight Central	29,305	3,644	—
Langlaagte Estate	52,944	—	739
Luipaardsvlei	21,543	42	—
Main Reef West	30,189	2,591	—
Meyer and Charlton	37,686	1,105	—
Modder B.	103,071	9,506	—

	Value.	Increase.	Decrease.
Modder Deep	81,013	6,763	—
New Goch	21,498	387	—
New Heriot	22,075	—	255
New Kleinfontein	91,369	2,043	—
New Modder	126,557	—	2,425
New Primrose	14,888	1,512	—
New Unified	13,924	531	—
Nourse Mines	54,647	—	1,066
Princess	25,545	361	—
Randfontein	198,229	—	9,103
Robinson	67,242	5,170	—
Roodepoort United M.R.	35,103	1,054	—
Rose Deep	74,603	1,967	—
Springs Mines	62,297	12,819	—
Van Ryn Estate	45,047	—	119
Van Ryn Deep	93,773	3,581	—
Village Deep	80,524	4,981	—
West Rand Consolidated	34,772	3,126	—
Witwatersrand	48,403	2,876	—
Witwatersrand Deep	45,646	463	—
Wolhuter	44,631	1,551	—
Jupiter	24,055	2,256	—
Knights Deep	74,752	11,440	—
Robinson Deep	62,862	1,176	—
Simmer and Jack	72,900	—	3,347
Simmer Deep	48,063	—	306
Crown Mines	240,863	25,877	—
Geldenhuys Deep	67,386	3,730	—
Village Main Reef	38,616	1,721	—
May Consolidated	13,928	13,928	—
Miscellaneous	16,361	10,759	—

## OUTSIDE DISTRICTS.

Sub Nigel	22,683	2,740	—
Barrett	1,160	—	407
Sheba	6,945	—	1,818
Glynn's Lydenburg	8,576	1,329	—
Nigel	17,475	748	—
Transvaal G.M. Estate	32,172	1,920	—
Miscellaneous	21,576	—	885

## NATIVE LABOUR.

Number of natives employed at the last day of the month by W.N.L.A. and contractors:—

On Gold Mines	180,168
On Coal Mines	11,432
On Diamond Mines	5,805
	197,405

The figures for the previous month were: On gold mines, 185,975; on coal mines, 11,435; on diamond mines, 6,314; total, 203,724.

**BROAD ROBERTS & CO.,**  
C/o VON BRANDIS & BREE STREETS,  
JOHANNESBURG.

Mathematical Instrument & Mechanical Accessories Works.

Electrical and Surveying Instruments. Motor Engine Parts.  
Magneto. Meters and Gauges. Munitions.  
Mica and Emery Manufactory.  
All Classes of Light Engineering Work.

Phone 2524.

Box 4777.

Telephone 266 Central.

**JAMES ROY & CO.,**  
Mining and Building Material Merchants,  
131, MARSHALL STREET, JOHANNESBURG.

HAVE FOR SALE, New and Second-hand:—

12" and 15" Truck Wheels, Truck Saddles,  
Steel Springs, Steel Shafting, Rails, Points and  
Crossings, Jib Cranes, Wood-Working Machinery,  
Steel Plates, etc., etc.

# SIEMENS BROTHERS & Co., LTD.

## WOOLWICH, LONDON, S.E.18.

ESTABLISHED 1858.

OVER 4,000 EMPLOYEES.

MANUFACTURERS OF—

### CABLES AND WIRES

For Electric Light and Power, Telephone, Telegraph and Signalling Purposes.

### TELEGRAPHHS AND TELEPHONES

Manual and Automatic.

### ELECTRIC SIGNALLING APPARATUS

Luminous Engine Room Telegraphs to suit requirements.

### EQUIPMENT FOR OVERHEAD TELEGRAPH, TELEPHONE AND POWER TRANSMISSION LINES

### PRIMARY CELLS

Fluid and Dry.

### EBONITE

@c.

@c.

@c.

Telegrams: "SIEMENS, WOOLWICH."

Telephone: CITY 6400 (7 lines).

## HOME BRANCHES:

BIRMINGHAM.—Central House, New Street.  
BRISTOL.—30, Bridge Street.  
CARDIFF.—89, St. Mary Street.  
GLASGOW.—66, Waterloo Street.  
MANCHESTER.—196, Deansgate.  
NEWCASTLE ON TYNE.—64-68, Collingwood Buildings.  
SHEFFIELD.—22, High Street.  
SOUTHAMPTON.—46, High Street

## INDIAN AND COLONIAL BRANCHES:

CALCUTTA.—Clive Buildings, Clive Street.  
BOMBAY.—Rampart Row.  
MADRAS.—Smith's Corner, Mount Road.  
SINGAPORE.—1, 2, 6 & 9, Winchester House.  
CAPE TOWN.—Norwich Union Buildings, St. George's Street.  
SYDNEY.—42, Bridge Street.

MELBOURNE.—Dominion Chambers, 59-61, William Street.  
WELLINGTON (N.Z.).—A & T. Burt, Ltd., Courtenay Place.  
DUNEDIN (N.Z.).—A. & T. Burt, Ltd., Stuart St.  
AUCKLAND (N.Z.).—A. & T. Burt, Ltd., Customs Street West

Sole Representative in South Africa:

**A. J. G. SIMPSON, A.M.I.E.E.,**  
P.O. Box 239, CAPE TOWN.

Telephone 1202.

Telegrams: "WOTAN."

## THE WEEK IN THE SHAREMARKET.

## Continued Dulness—Favourites Weaker—Dividend Declarations.

THE market opened weak on Saturday and was distinctly on the down grade at high change, notably in all the favourite stocks. After a silence of years, Rose Deepes were resurrected with a buying offer of 17s., but no selling price was made at the time, but subsequently one deal went through at 20s. New Compound Diamonds were in a bad way, sales of odd lots taking place at the low figure of 7s. Monday morning brought no improvement. At the call, every stock of importance was marked down, with the exception of Van Ryn Deepes, Sub Nigels, and the Modder trio. Business was dull during the whole day, and the close showed no betterment in prices. The market was rather more active on Tuesday morning and the volume of business somewhat greater, and though prices were irregular the general balance was to the good. Why, however, Consolidated Mines Selections should ease off when Brakpans, Daggafonteins and Rand Selections were all strong, is difficult of explanation. City and Suburban and Consolidated Investments were both decidedly weak. The market closed somewhat harder with an improvement in Government Areas and Springs Mines. On Wednesday morning all the better class stocks were harder, especially Rand Selections. City and Suburbans were again a weak feature, as also Wohluters and East Rands. In the afternoon Springs Mines declined, and the buying price of Government Areas was converted into the selling one. Thursday morning's call was a limited and weak one, seven sales only being booked. The one strong feature was Modder Deepes. City and Suburbans recovered slightly and Van Ryn Deepes were firm, but all the favourites went lower, including Rand Selections. It was officially announced that Kleinfonteins had passed their dividend, which did not improve the position of the stock. Geduld Proprietary seemed out of favour, judging from the number of sellers. The dealings in outside stocks during the period under review were as under:— Sales: Compounds, 7s. to 10s.; Montelecos, 77s. 6d. to 87s. 6d., odd lots; Henderson's Consolidated, 5s. 1d. to Options, 1s. 1d. to 1s. 3d.; Alkalies, 30s. to 32s. 6d.; Phoenix, 10d.; New Farms, 1s. 11d. to 2s. 2d. Other quotations: South Van Ryns, buyers from 6s. 6d. to 7s.; Daggafontein Options, 8s. 9d. buyers; Union Tins, 3s. to 3s. 1d. buyers; Modder East Options, 7s. 9d. buyers.

\* \* \* \* \*

On Thursday afternoon, Modder Deepes advanced to £6 18s. 6d. buyers, and maintained their position on Friday morning. City and Suburbans made a further small advance, while City Deepes came somewhat easier, as also Rand Selections. East Rands continue on the down grade, with sellers ex London at 7s., the best cash offer being 5s. 6d. Brakpans were strong at 99s. buyers. The remaining stocks were unchanged. Business was again limited, only eight stocks being dealt in.

\* \* \* \* \*

	Fri.	Sat.	Mon.	Tues.	Wed.	Thurs.
	8th.	9th.	11th.	12th.	13th.	14th.
African Farms . . . . .	8 0 <sup>t</sup>	7 9 <sup>*</sup>	7 9 <sup>*</sup>	7 9 <sup>*</sup>	7 9 <sup>*</sup>	7 10 <sup>*</sup>
Apex Mines . . . . .	—	6 3 <sup>*</sup>	6 6 <sup>*</sup>	6 6 <sup>*</sup>	6 9 <sup>*</sup>	6 9 <sup>*</sup>
Aurora Wests . . . . .	15 6 <sup>t</sup>	15 6 <sup>t</sup>	15 6 <sup>t</sup>	—	—	15 6 <sup>t</sup>
Bantjes Cons. . . . .	6 6 <sup>*</sup>	6 7 <sup>*</sup>	6 7 <sup>*</sup>	6 6 <sup>*</sup>	6 4 <sup>*</sup>	6 3 <sup>*</sup>
Brakpan Mines . . . . .	100 0 <sup>t</sup>	97 0 <sup>t</sup>	99 6	98 6 <sup>*</sup>	98 6 <sup>*</sup>	98 6 <sup>*</sup>
Breyten Collieries . . . . .	17 0 <sup>t</sup>	17 0 <sup>t</sup>	17 0 <sup>t</sup>	17 0 <sup>t</sup>	17 0 <sup>t</sup>	17 0 <sup>t</sup>
Brick and Potteries . . . . .	—	5 0 <sup>*</sup>				
British South Africa . . . . .	10 0 <sup>*</sup>	12 6 <sup>t</sup>	—	10 0 <sup>*</sup>	—	—
Bushveld Tins . . . . .	0 4 <sup>t</sup>	0 4 <sup>t</sup>	0 4 <sup>t</sup>	—	0 4 <sup>t</sup>	—
Cassel Coals . . . . .	—	—	30 0 <sup>t</sup>	—	—	—
Cinderella Cons. . . . .	—	4 0 <sup>*</sup>	4 0 <sup>*</sup>	5 0 <sup>*</sup>	5 0 <sup>*</sup>	5 0 <sup>*</sup>
City and Subs. . . . .	30 6 <sup>t</sup>	30 0 <sup>t</sup>	30 6 <sup>t</sup>	29 0	28 6	29 6 <sup>t</sup>
City Deepes . . . . .	79 0	78 6 <sup>t</sup>	78 0 <sup>t</sup>	79 6 <sup>t</sup>	79 0 <sup>t</sup>	19 6 <sup>t</sup>
Cloverfield Mines . . . . .	8 3 <sup>*</sup>	8 3	8 4	8 3 <sup>*</sup>	8 3 <sup>*</sup>	8 3 <sup>*</sup>
Clydesdale Colls. . . . .	—	—	12 6 <sup>t</sup>	12 6 <sup>t</sup>	12 6 <sup>t</sup>	12 6 <sup>t</sup>
Con. Investments . . . . .	17 3 <sup>t</sup>	17 6 <sup>t</sup>	17 6 <sup>t</sup>	—	18 0 <sup>t</sup>	18 0 <sup>t</sup>
Con. Langlaagte . . . . .	24 6 <sup>t</sup>	24 0 <sup>t</sup>	23 0 <sup>t</sup>	23 0	23 6 <sup>t</sup>	—
Con. Main Reefs . . . . .	16 3 <sup>t</sup>	16 0 <sup>t</sup>	16 0 <sup>t</sup>	—	—	—
Con. Mines Selection . . . . .	25 0	24 9	24 6 <sup>t</sup>	24 3 <sup>t</sup>	24 6 <sup>t</sup>	24 3 <sup>t</sup>
Coronation Colls. . . . .	33 0 <sup>t</sup>	33 0 <sup>t</sup>	—	—	33 0 <sup>t</sup>	—

\*Buyers.

†Sellers.

▲Odd lots

■Ex London

	Fri.	Sat.	Mon.	Tues.	Wed.	Thurs.
	8th.	9th.	11th.	12th.	13th.	14th.
Crown Diamonds . . . . .	—	1 3 <sup>*</sup>	1 3 <sup>*</sup>	—	1 0 <sup>*</sup>	2 0 <sup>t</sup>
Crown Mines Debs. . . . .	£99 <sup>t</sup>	—	£99 <sup>t</sup>	—	£99 <sup>t</sup>	—
Daggafonteins . . . . .	22 3 <sup>t</sup>	22 3 <sup>t</sup>	22 0 <sup>t</sup>	23 0	22 6 <sup>t</sup>	23 6 <sup>t</sup>
De Beers Pref. . . . .	£13 <sup>t</sup>	—	—	—	—	—
Durban Rood. Deepes . . . . .	9 0	15 0 <sup>t</sup>	15 0 <sup>t</sup>	—	20 0 <sup>t</sup>	—
E.R. Centrals . . . . .	—	—	10 0 <sup>t</sup>	10 0 <sup>t</sup>	10 0 <sup>t</sup>	10 0 <sup>t</sup>
E.R. Coals . . . . .	1 11 <sup>t</sup>	2 0	2 0 <sup>t</sup>	2 0 <sup>t</sup>	2 0 <sup>t</sup>	2 0 <sup>t</sup>
E.R. Deepes . . . . .	1 0 <sup>t</sup>	0 9 <sup>t</sup>				
E.R. Minings . . . . .	—	—	12 0 <sup>t</sup>	12 0 <sup>t</sup>	—	15 0 <sup>t</sup>
E.R. Props. . . . .	8 2 <sup>t</sup>	7 0 <sup>t</sup>	7 6 <sup>t</sup>	7 6 <sup>t</sup>	7 6	6 6 <sup>t</sup>
Eastern Golds . . . . .	1 1	1 0 <sup>t</sup>				
Frank Smith Dmds. . . . .	3 4 <sup>t</sup>	3 3 <sup>t</sup>	3 3 <sup>t</sup>	3 4 <sup>t</sup>	3 7	3 6
Geduld Props. . . . .	39 3 <sup>t</sup>	39 0 <sup>t</sup>				
Glencairns . . . . .	—	—	—	—	—	1 0 <sup>t</sup>
Glencoe Collieries . . . . .	9 6 <sup>t</sup>	8 9 3 <sup>t</sup>	9 6 <sup>t</sup>	9 3 <sup>t</sup>	9 3 <sup>t</sup>	9 3 <sup>t</sup>
Glynn's Lyndenburgs . . . . .	15 0 <sup>t</sup>	15 3	15 3 <sup>t</sup>	16 0 <sup>t</sup>	16 0 <sup>t</sup>	16 0 <sup>t</sup>
Govt. Areas . . . . .	63 3	62 9	62 3	62 6	63 0 <sup>t</sup>	62 9 <sup>t</sup>
Jupiters . . . . .	4 0 <sup>t</sup>	4 1 <sup>t</sup>	4 0 <sup>t</sup>	—	4 0 <sup>t</sup>	4 0 <sup>t</sup>
Knight Centrals . . . . .	6 0 <sup>t</sup>	6 0 <sup>t</sup>	5 9 <sup>t</sup>	5 6	5 3	5 0 <sup>t</sup>
Lace Props. . . . .	4 10 <sup>t</sup>	4 10 <sup>t</sup>	4 10 <sup>t</sup>	4 6	4 6	4 6 <sup>t</sup>
Leeuwpoort Tins . . . . .	13 6 <sup>t</sup>	14 0 <sup>t</sup>	14 0 <sup>t</sup>	14 3 <sup>t</sup>	14 3 <sup>t</sup>	14 6 <sup>t</sup>
Luipaardsvlei Est. . . . .	2 9 <sup>t</sup>	3 0 <sup>t</sup>	3 9 <sup>t</sup>	4 0 <sup>t</sup>	4 0 <sup>t</sup>	—
Lydenburg Farms . . . . .	6 9 <sup>t</sup>	6 10	6 9 <sup>t</sup>	6 9 <sup>t</sup>	6 9 <sup>t</sup>	6 9 <sup>t</sup>
Main Reef Wests . . . . .	4 0 <sup>t</sup>	4 0 <sup>t</sup>	4 3	4 2 <sup>t</sup>	4 2	4 4 <sup>t</sup>
M.R. West Debs. . . . .	—	£45 <sup>t</sup>	—	—	—	—
Middelvlei Est. . . . .	—	—	1 0 <sup>t</sup>	1 0 <sup>t</sup>	—	—
Modder B's . . . . .	154 6 <sup>t</sup>	156 0 <sup>t</sup>	156 0 <sup>t</sup>	155 0 <sup>t</sup>	155 0	156 0 <sup>t</sup>
Modder Deepes . . . . .	134 0	134 0 <sup>t</sup>	134 0 <sup>t</sup>	134 0 <sup>t</sup>	134 6 <sup>t</sup>	137 0
Natal Navig. Colls. . . . .	18 6 <sup>t</sup>	—				
National Banks . . . . .	—	—	—	—	£111 <sup>t</sup>	—
New Boksburgs . . . . .	1 5 <sup>t</sup>	1 4 <sup>t</sup>				
New Eland Dmds. . . . .	28 0 <sup>t</sup>	28 6 <sup>t</sup>	26 0 <sup>t</sup>	28 6 <sup>t</sup>	29 0 <sup>t</sup>	28 0 <sup>t</sup>
New Era Cons. . . . .	9 7 <sup>t</sup>	9 8	9 6 <sup>t</sup>	9 8	9 6 <sup>t</sup>	9 6 <sup>t</sup>
New Geduld Deepes . . . . .	6 6 <sup>t</sup>					
New Heriots . . . . .	—	—	—	40 0 <sup>t</sup>	—	32 6 <sup>t</sup>
New Kleinfonteins . . . . .	18 3	18 3 <sup>t</sup>	18 0	18 0	17 9 <sup>t</sup>	17 0 <sup>t</sup>
New Modders . . . . .	420 0 <sup>t</sup>	422 6 <sup>t</sup>	422 6 <sup>t</sup>	420 0 <sup>t</sup>	420 3 <sup>t</sup>	421 3 <sup>t</sup>
New Unifeds . . . . .	12 6 <sup>t</sup>	—	12 6 <sup>t</sup>	12 6 <sup>t</sup>	—	—
Nourse, Mines . . . . .	21 0 <sup>t</sup>	21 9 <sup>t</sup>	21 9 <sup>t</sup>	20 9 <sup>t</sup>	21 0	21 0 <sup>t</sup>
Pretoria Cements . . . . .	88 6 <sup>t</sup>	86 0 <sup>t</sup>				
Princess Estates . . . . .	—	1 4 <sup>t</sup>	1 4 <sup>t</sup>	2 0 <sup>t</sup>	2 0 <sup>t</sup>	—
Rand Klips . . . . .	9 3 <sup>t</sup>	9 1	9 0 <sup>t</sup>	9 3 <sup>t</sup>	9 3 <sup>t</sup>	9 3 <sup>t</sup>
Rand Nucleus . . . . .	1 4 <sup>t</sup>	—	1 4 <sup>t</sup>	1 4 <sup>t</sup>	1 4 <sup>t</sup>	1 4 <sup>t</sup>
Rand Select. Corp. . . . .	76 9 <sup>t</sup>	76 0	75 3	76 6	77 6	76 6
Randfontein Deepes . . . . .	5 6 <sup>t</sup>	5 0 <sup>t</sup>	—	5 0 <sup>t</sup>	5 0 <sup>t</sup>	5 6 <sup>t</sup>
Randfontein Est. . . . .	13 9 <sup>t</sup>	13 9	13 1 <sup>t</sup>	13 3 <sup>t</sup>	13 9	13 6 <sup>t</sup>
Roberts Victors . . . . .	—	—	—	10 0 <sup>t</sup>	—	10 0 <sup>t</sup>
Rooibergs . . . . .	6 0 <sup>t</sup>	6 3	6 6 <sup>t</sup>	6 6 <sup>t</sup>	5 9 <sup>t</sup>	6 3 <sup>t</sup>
Roopepoort Uniteds . . . . .	—	6 0 <sup>t</sup>	6 0 <sup>t</sup>	6 3 <sup>t</sup>	—	—
Rose Deepes . . . . .	—	17 0 <sup>t</sup>	19 0 <sup>t</sup>	—	—	17 0 <sup>t</sup>
Ryan Nigels . . . . .	—	—	2 5 <sup>t</sup>	—	—	2 0 <sup>t</sup>
Shebas . . . . .	1 3 <sup>t</sup>	—	1 4 <sup>t</sup>	1 3	—	1 6 <sup>t</sup>
Simmer Deepes . . . . .	2 6 <sup>t</sup>	—	2 0 <sup>t</sup>	2 0 <sup>t</sup>	2 3	2 2 <sup>t</sup>
S.A. Breweries . . . . .	—	—	29 6 <sup>t</sup>	29 0 <sup>t</sup>	—	—
S.A. Lands . . . . .	4 1 <sup>t</sup>	4 1	4 1 <sup>t</sup>	4 1 <sup>t</sup>	4 2	4 2 <sup>t</sup>
Spring Mines . . . . .	60 0	60 0	59 6	59 9	60 6	59 9 <sup>t</sup>
Standard Bank . . . . .	—	200 0 <sup>t</sup>	—	—	—	—
Sub Nigels . . . . .	25 0 <sup>t</sup>	24 9 <sup>t</sup>	25 0	24 9 <sup>t</sup>	25 3 <sup>t</sup>	24 9 <sup>t</sup>
Swaziland Tins . . . . .	25 0 <sup>t</sup>	—	26 0 <sup>t</sup>	26 0 <sup>t</sup>	30 0 <sup>t</sup>	26 0 <sup>t</sup>
Transvaal Lands . . . . .	12 0 <sup>t</sup>	10 0 <sup>t</sup>	10 0 <sup>t</sup>	10 0 <sup>t</sup>	10 6	10 0 <sup>t</sup>
Trans. G.M. Estates . . . . .	13 0 <sup>t</sup>	13 0 <sup>t</sup>	14 0 <sup>t</sup>	13 0 <sup>t</sup>	15 0 <sup>t</sup>	13 0 <sup>t</sup>
Van Ryn Deepes . . . . .	66 6	66 0	66 4 <sup>t</sup>	66 3	66 9	67 6 <sup>t</sup>
Village Deepes . . . . .	24 6 <sup>t</sup>	24 6	25 0 <sup>t</sup>	—	24 6 <sup>t</sup>	24 0 <sup>t</sup>
West Rand Cons. . . . .	—	—	7 0 <sup>t</sup>	43 0 <sup>t</sup>	—	7 0 <sup>t</sup>
Withbank Colls. . . . .	43 0 <sup>t</sup>	—	43 0 <sup>t</sup>	43 0 <sup>t</sup>	43 0 <sup>t</sup>	43 6 <sup>t</sup>
Witwatersrand . . . . .	—	—	39 0 <sup>t</sup>	42 6 <sup>t</sup>	—	42 6 <sup>t</sup>
Wit. Deepes . . . . .	13 0 <sup>t</sup>	13 0 <sup>t</sup>	13 0 <sup>t</sup>	14 0 <sup>t</sup>	14 0 <sup>t</sup>	14 3 <sup>t</sup>
Wolluters . . . . .	8 1 <sup>t</sup>	8 0 <sup>t</sup>	8 0 <sup>t</sup>	8 0	7 11 <sup>t</sup>	—
Zuiplaats Tins . . . . .	7 1	6 10	6 9	6 4	6 3	6 1 <sup>t</sup>
Union 5 per cent: 8th, £100 1s. 10d.; 9th, £100 1s. 10d.; 10th, £100 2s. 6d.; 12th, £100 3s. 1 <sup>t</sup> d.; 13th, £100 3s. 1 <sup>t</sup> d.; 14th, £100 4s. 4d <sup>t</sup>	—	—	—	—	—	—

\*Buyers. +Sellers. ▲Odd lots. ■Ex London.

**EDWARD DODD, 19, LOVEDAY STREET**  
(Opposite Goldfields Hotel).

Mathematical, Nautical, Scientific and Electrical  
Instrument Maker.

Theodolites, Tacheometers, Levels, Artificial Horizons, Compasses, Etc. Switch-  
boards, Telephones, Telegraph Instruments, Meggers and Meters. Fine  
Engineering and Small Press Work Executed. Telephone 3758.

W. L. SAUNDERS, Chairman of Board.  
W. R. GRACE, V.P. and Treas.

GEORGE DOUBLEDAY, President.  
F. A. BRAINERD, Sec.  
J. H. JOWETT, G.S.M.

# Cameron

# Centrifugal Pumps

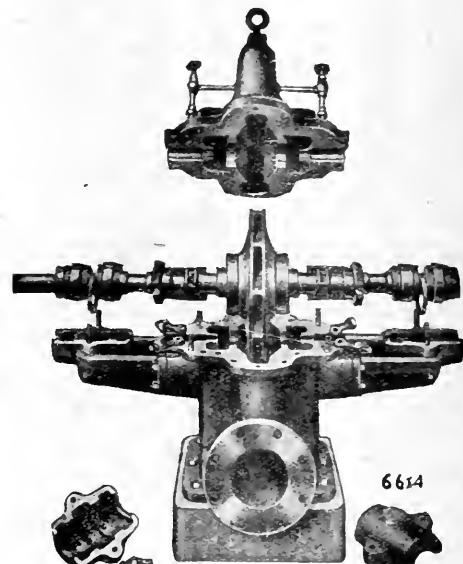
## For Highest Efficiency.



The Simplicity of Design and High Quality of Material and Workmanship produce a Pump of Extreme Reliability.

Cameron Centrifugal Pumps have been thoroughly . . . PROVED under all conditions of service.

The Horizontally-Split Casing permits ready access to all Parts without disconnecting any Piping.



# INGERSOLL-RAND CO.

Exploration Buildings.

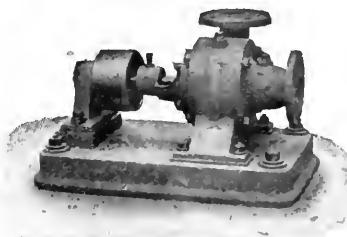
Johannesburg.

# ALFRED F. ROBINSON, LTD.,

17/19 & 22, Southern Life Buildings, JOHANNESBURG.

Sole Agents for **Messrs. R. GARRETT & SONS**, Leiston, Suffolk: Locomotives, Portable Engines, etc.; **Messrs. BRITISH MANNESMAN TUBE CO., LTD.**, Landore, Wales: Solid Drawn Piping, Poles and Boiler Tubes; and **Messrs. SULZER BROS.**, Winterthur, Switzerland: Centrifugal Pumps, Diesel Engines, etc.

Wrought Iron Pipe Fittings.



P.O. Box 3228, Johannesburg.

Phone No. 3516.

Telegrams: "ALPHA."

## THE WEEK IN THE MINING MATERIAL AND ENGINEERING TRADES.

**Machinery Spares Short on the Mines—Priority Certificates—Trend of Business—New Industry Encouraged by Germiston—Rise in Petrol and Paraffin.**

THE shortage of machinery spares and the smaller class of machinery in constant use on the producing mines is getting into the acute stage. It will be remembered at the beginning of the war, and after that, the mines filled their store-houses with an abundance of stores, but not so with machinery and its spares, although this department was not neglected. However, as the war has been in existence now nearly three years it is not surprising that certain lines are worn out and require replacing. To meet this contingency, the Chamber of Mines are pressing the British Government through the South African Commissioner in London to relieve the position here. To provide shipping accommodation, and secondly to allow manufacturers a certain respite to make the machinery and spares essential for the smooth running of our mines.

### PRIORITY CERTIFICATES.

Many merchants have been caught napping as regards complying with the regulations issued in London in February last by the Minister of Munitions, therefore much material expected per last mails did not come; hence much cabling. The fact is that importers on this side did not realise that the authorities in London meant what they said, and now that the matter has plainly become serious, they are opening their eyes to the fact that the necessary papers must be forwarded with the indents. There was a little excuse for this state of somnolence, as many things, when once accepted to be essential for export were allowed through as a matter of course, but lately that has been altered and the conditions have to be strictly complied with.

Regulation C. under Class B. reads: "Export orders, certified in writing by the Board of Trade, the Admiralty, the War Office or Minister of Munitions to be of sufficient

national importance to be specially approved for export to approved destinations, and as to which the Minister of Munitions or other Government Department controlling the necessary materials has certified that such materials can be spared." The big wholesale houses who also have retail departments attached, are in the worst quandary, because in supplying small quantities, which mount up in the aggregate during any one month, they lose count of the position. Now it often happens—in fact, it is becoming very much the rule—that one merchant will not supply another unless an understanding is given that the duplicates of the railway notes and other necessary papers are supplied. One firm has had a clerk specially employed during the past three weeks ferreting out information to be sent to London in

## NO MORE AIR LOSSES.

**Pressed Steel  
Bronze-Seated.**

## ROCKWOOD UNIONS.

**Rustless. - Airtight.**

**Tested to 1000-lbs. per sq. in.**

**COPPIN & LLOYD,** 182 & 184, FOX ST.,  
JOHANNESBURG.

MACHINERY MERCHANTS & DEALERS.

The Firm who always have their finger on the Pulse of the Market.  
We Specialise in your needs—therefore consult us.  
Box 2828. Tel. Add.: "INTEREST." Phone 1986.

Sole Agents—Transvaal:

H. ALFRED HANKEY  
P.O. Box 3807,  
JOHANNESBURG.

Sole Agents—Natal & O.F.S.:

THO. BROWNE & SONS,  
P.O. Box. 1011,  
DURBAN.

# “HYDROMAX”

New Water Hammer Drills to  
supersede Reciprocating Drills.

The “Hydromax” weighs 90-lbs.

It is Suitable for Stoping, Raising and Driving.



It drills 30% faster than any other drilling machine.

Low Air Consumption.

No Mine Manager can afford to neglect the economic merits of the

**‘HYDROMAX’**

The Fastest Rock Drill  
in the World.

We have exclusively manufactured drills for thirty-seven years and the “HYDROMAX” is our crowning effort.

**THE CLIMAX ROCK DRILL & ENGINEERING WORKS, Ltd.,**  
**CARN BREA, CORNWALL** (Wm. C. Stephens, Managing Director).

Agents—

**WM. HOSKEN & CO.,**

Phones 4113 / 9.

Box 667, JOHANNESBURG. Telegrams: “HOSKEN.”

**S. SYKES & Co., Ltd., Johannesburg.**  
P.O. Box 2303. Telegrams: "PSYCHE."

**Mechanical and Electrical Engineers.**

REPRESENTATIVES OF

**POWER & MINING MACHINERY CO., N.Y.**  
**GYRATORY & JAW CRUSHERS FOR ANY CAPACITY.**  
**ALL KINDS OF MINING MACHINERY.**

Rhodesian Branches: BULAWAYO and SALISBURY.

support of indents pigeon-holed there awaiting supporting documents. It is simple enough, providing a little application is given to the subject and a system established.

THE TREND OF BUSINESS.

According to the manager of a leading firm, business is pretty much of a gamble, as one never knows a price from one day to another, and often it is a matter of hours. It is of paramount importance to get a shrewd idea of what is in stock, and who are buying, and what quantities are wanted, as the trade barometer is so super-sensitive that even a hint of the most casual kind alters the price in the upward direction, or stops a deal which would go through as a matter of course in ordinary times. As previously remarked, this is a day of substitutes, therefore stocks, which have been considered obsolete, are gradually being sold and brought into use. Obviously in such a great mining industry as ours, improvements, problematical and otherwise, are introduced from time to time, to the displacement of stocks on hand. Hence a tendency for material to accumulate, but even for that a harvest has come, as for example a big line which had been side-tracked for fifteen years and written off in depreciation to nil in the stock books, was sold during the week at an excellent price, much to the satisfaction of the holders. Here also the engineering shops come in, as much of the old shafting is being re-turned and so made to do duty again instead of being scrapped. All kinds of unheard of problems are daily dealt with in the foundries and engineering shops, in providing substitutes and making the "square hole propositions fit into the round ones."

A NEW INDUSTRY ENCOURAGED BY A MUNICIPALITY.

In consequence of carbide having gradually risen to £85 per ton, rumours have been current that a factory would be started on the Reef. The rumour in this instance proved correct, as the foundation stone was laid at Germiston on Wednesday, evidently thanks to the enterprise of that Municipality in laying out sites to attract manufacturers, six of which have already been taken up. The Mayor in this connection remarked that it was hoped that others would come along to avail themselves of the privileges offered. Another gentleman said that if the citizens of Germiston did their part and took advantage of their natural resources they had nothing to fear, and so in the fulness of time Germiston would become a big manufacturing centre in South Africa. Other Municipalities should ponder these proceedings well over and never let opportunities slip through indifference and lack of enterprise. Returning to the subject of carbide, it is understood that the Victoria Falls-Power Company are assisting the enterprise in its initial stages as regards a little machinery and cheap power. A great deal depends upon cheap power, as most of the carbide has hitherto come from Norway and Sweden, as well as Canada, where unlimited water power is available. However, when once the industry is established here, with such an incentive as 85s. per 100 lbs, as compared with 19s. in pre-war days, such a send-off should enable it to meet whatever competition offers after the war. The raw material, viz., lime and coke, are on the spot in super-abundance, as to-day the Rand kilns are sending lime to all parts of South Africa, and again this is one of the cheapest places in the world for coal.

BUILDERS' HARDWARE AND GALVANISED GOODS

With very few exceptions, there are extraordinary supplies of builders' hardware, naturally at the higher values, which, however, on the whole have not unduly advanced. The local foundries are assisting to keep up the supplies of silt gratings, as well as furnace bars and gratings, also all missing and broken parts of grates can usually be made

**The PAGE-HERSEY TUBE Co.**

THE ONLY MAKERS OF LAP WELDED PIPING IN CANADA.

THE ONLY MAKERS IN CANADA OF PIPING ACCORDING  
IN ALL SIZES TO SOUTH AFRICAN STANDARD WEIGHTS.

PAGE-HERSEY IS STANDARD PIPING IN AUSTRALIA AND  
NEW ZEALAND.

Every Length of Piping Marked



Box 3807.

'Phone 5892.

**DELTA METAL**

H. ALERS HANKEY - - - Sole Agent.

Tested and Adopted by the Admiralty Royal Ordnance War Office

PATENT

# VISLOK

PATENT

## RELIABLE SAFETY LOCK NUT

*Unsolicited Testimonials*

*Repeat Orders given*

### PONTHENRY COLLIERY.

VISLOKS are used on places where Ordinary Nuts put on double would not remain locked for even a few hours, such as on shaking screens, eccentrics driving the same and those driving the washery plungers: eccentrics of small hauling engines and other places where there is considerable vibration. WE HAVE FOUND VISLOK EXCEEDINGLY EFFECTIVE AND RELIABLE: IN FACT WE HAVE NOT HAD THE SLIGHTEST TROUBLE SINCE ADOPTING

### NINE MONTHS ON 10-TON STEAM ROAD ROLLER AND SCARIFIER.

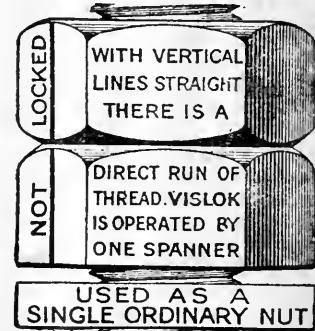
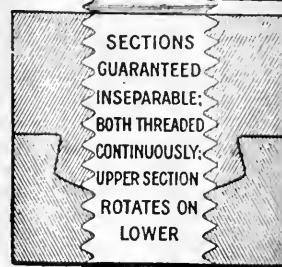
Mr. W. J. SMITH, C.E., Engineer and Surveyor, Market Harborough, writes May 8, 1916:

Your men at my request fitted the VISLOK, and after NINE MONTHS almost daily rolling and scarifying, in some cases pulling up Tar Macadam surfaces, there has not been found one loose Vislok, neither has my Engineman, during that period had to tighten a single Vislok, and to-day they appear as fast as the first day they were fixed.

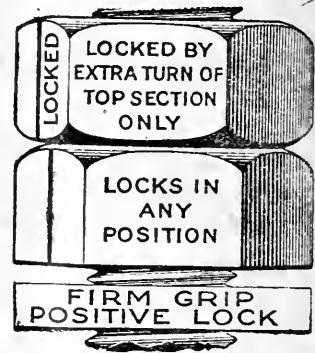
#### UNIQUE RECORD

2 to 4 INCHES  
HIGHLY SATISFACTORY  
GREAT ECONOMY  
SAVES BOLTS RELIABLE & SAFE

#### WHY IT LOCKS



USED AS A SINGLE ORDINARY NUT



**VISLOK Ltd.**, 3, ST. BRIDE'S HOUSE, SALISBURY SQUARE, FLEET STREET, LONDON, E.C.

FREE SAMPLE FOR TESTING ON APPLICATION TO

JOHANNESBURG AGENTS:  
HARVEY & RUSSELL Ltd.,  
Box 1043.

DURBAN AGENT:  
J. MORTIMER MOIR,  
Smith Street.

CAPE TOWN AGENTS:  
JOHN HADDON & CO. (Africa) Ltd.  
80 Bree Street.

at the foundries. Steel ceilings have sharply risen from 5s. to 6s. per square, owing to the present poor prospects of obtaining future supplies. Galvanised flat iron has risen to 9s. per 100 lbs. and no quantity is available even at that high figure. All galvanised goods are being absorbed without replacement, hence there is no stability from day to day in prices. Similar remarks apply to steel goods. Different kinds of enamel baths and sanitary ware are still in good supply, therefore builders need not stop for want of supplies, providing they are willing to pay the enhanced values. Rim and mortice locks have advanced from 6s. to 10s. a dozen.

#### ELECTRICAL GOODS.

The ordinary household metal filament lamps are scarce, and the price has advanced smartly in consequence. The prospects of getting adequate supplies are anything but bright as very little electrical goods came out by the last mails. Business is quiet through the shortage of stocks, which requires qualifying. It appears there are plenty of some kinds, but many of the etceteras are lacking, therefore jobs cannot be completed, and another reason is that the Johannesburg Municipality are not giving any new (as distinct from old promises) electric light connections. The mines have practically cleared the merchants' stores of electric motors and power transmitters, as well as cables.

#### RISE IN PETROL AND PARAFFIN.

A local advance of sixpence per case has taken place in paraffin, also a shilling in petrol, as well as various amounts in cylinder oils according to the quality. A representative of a leading American house states that the shipping position as between New York and the Cape is more encouraging than for the past two months. He also expressed the opinion that the supplies of petrol and paraffin would now come forward much as usual. In another quarter it was ascertained that the motor firms in New York had approached their Government with the view of getting the necessary shipping to enable them to complete the old orders on their books for South Africa, also to send spares to keep the motor garages supplied. The party giving the information was sufficiently optimistic to think we might have this accomplished during July. Again in another quarter there are hopes of shortly receiving a decent consignment of steel plates bought direct by the representatives of the mining houses some time ago.

#### VARIOUS TRADE ITEMS.

An estimate for a motor garage was made about twelve months ago for £52, but the work was not gone on with them. However, the recent rains hurried matters, and something had to be done, and the cost was £97. White lead is up another 5s., and margins are bigger in oils and colours because of the speculative gambling element. Timber is quoted from Sweden and a few contracts are known to have been arranged at about the latest values; the higher landed cost here is owing to increased freight and insurance charges. It is said that deals are being sold too cheaply, as they cannot be replaced at the price under present conditions. Second-hand dealers in building material have been exceedingly quiet during the week as the wintry weather, with occasional showers of sleet and rain, has been a decided check to country people visiting the town. Contracts for ten thousand South African made miners' boots are now of common occurrence.

#### REVISED PRICE LIST.

Iron, imported,  $\frac{1}{4}$  round, 40s. to 50s.;  $\frac{1}{2}$  up to 1 in., 37s. 6d. to 50s.; 2 in. to 6 in., 30s. per 100 lbs. Ditto, square,  $\frac{1}{4}$  up to 1 in., 30s. to 45s.;  $\frac{1}{2}$  in. to  $2\frac{1}{2}$  in., 25s. to 30s.;  $2\frac{1}{2}$  in. to 5 in., 25s. Flats, 3-16 in., 40s.; all from  $\frac{1}{4}$  in. up, 50s. Angles,  $\frac{1}{4}$  in. to 3-16 in., 37s. 6d. to 40s.; all sizes;  $\frac{1}{4}$  in., 37s. 6d.; 5-16 in. to  $\frac{1}{4}$  in., 35s., excepting

$5 \times 1 \times \frac{1}{2}$  in.; mild steel bar, 5d. lb.; drill, 7d. lb.; steel plates, 10 ft. by 4 ft. by 1-16 in., 50s.;  $\frac{1}{2}$  in. by 3-16 in., 50s.;  $\frac{1}{2}$  in. to 5-16 in., 40s. to 50s.;  $\frac{1}{2}$  in. up to 40s.; 10 ft. by 5 ft. by 1-16 in., 45s.;  $\frac{1}{2}$  in. and 3-16 in., 42s. 6d. to 45s.;  $\frac{1}{2}$  in. to 5-16 in., 37s. 6d. to 42s. 6d.;  $\frac{1}{2}$  in. up to 35s.; intermediate sizes up to 12 ft. by 6 ft. by 1-16 in., 42s.;  $\frac{1}{2}$  in. and 3-16 in., 34s. 6d.;  $\frac{1}{2}$  in. and 5-16 in., 33s.;  $\frac{1}{2}$  in. and up, 32s., all at per 100lb.; hexagon and cuphead bolts,  $\frac{1}{2}$  in. dia., 1s. 9d. lb.; 5-16 in. dia., 1s. 6d. lb.;  $\frac{1}{2}$  in. dia. up to 3in. long, 1s. lb.;  $\frac{1}{2}$  in. dia., 11d. lb.;  $3\frac{1}{2}$  in. and up long, 11d. lb.;  $\frac{1}{2}$  in. dia. up to  $2\frac{1}{2}$  in. long, 62s. 6d. 100 lbs.;  $\frac{1}{2}$  in. dia. and 2 $\frac{1}{2}$  in. up long, 60s. 100lbs.;  $\frac{1}{2}$  in. dia. up to  $2\frac{1}{2}$  in. long, 55s. 100 lbs.;  $\frac{1}{2}$  in. dia.  $2\frac{1}{2}$  in. and up long, 52s. 6d. 100 lbs.;  $\frac{1}{2}$  in. dia.  $2\frac{1}{2}$  in. and up long, 50s. 100 lbs.;  $\frac{1}{2}$  in. and 1in. dia., same price as  $\frac{1}{2}$  in. diameter; nuts, 3in., 1s. 3d. lb.;  $\frac{1}{2}$  in., 65s.;  $\frac{1}{2}$  in., to  $1\frac{1}{2}$  in., 62s. 6d.;  $1\frac{1}{2}$  in. and  $1\frac{1}{2}$  in., 70s.;  $1\frac{1}{2}$  in. to  $1\frac{1}{2}$  in., 75s.; 2in. up, 85s.; washers, all sizes, 45s.; rivets, 3-16 in., 1s. 6d. lb.;  $\frac{1}{2}$  in., 5-16 in., 1s. 3d. lb.; 7-16 in., 3in., 9d. lb.;  $\frac{1}{2}$  in., 52s. 6d.;  $\frac{1}{2}$  in., 50s.;  $\frac{1}{2}$  in. up, 49s. 100 lbs.; shoes and dies, 32s. 6d. to 38s. per 100 lbs.; rails, £23 per ton; picks, 4lbs., 27s. per doz.; shovels, 32s. 6d. to 55s. per dozen; drill hammers, 5d. to 6d. per lb.; hammer handles (best American), 14 in., 3s. 6d., 24 in., 7s., 30 in., 9s. 6d., 36 in., 18s., per dozen; metal, anti-friction, 1s. per lb.; galvanised iron, 24 gauge, 6 ft. to 10 ft., 1s. 6d., 11 ft. 1s. 6d., 12 ft. 1s. 6d.; 26 gauge, 6 ft. to 8 ft. 1s. 3d., 9 ft. and 10 ft. 1s. 6d.; flat galvanised, 18 to 24 gauge, 85s.; 26 gauge, 90s. 100 lbs.; floor brads, 40s.; ceiling, 42s. 6d.; wire nails, 37s. 6d. to 55s. per 100 lbs.; solder, 50 per cent., 2s. per lb.; locks, rim, 60s.; mortice, 70s. per dozen; barbed wire, 15s. per 100 lb. coil.

Timber: Deals, Baltic, 9 x 3, short and medium, 1s. 3d.; longer lengths, 1s. 3d. (Oregon, 1s. 1d.); flooring,  $4\frac{1}{2}$  x  $\frac{1}{2}$  and 6 x  $\frac{1}{2}$ ,  $7\frac{1}{2}$  d. to 7d. per sq. ft.; do.,  $4\frac{1}{2}$  x 12, 9d.; and 6 x  $1\frac{1}{2}$ , 9d.; ceilings, 6 x  $\frac{1}{2}$ , 1d. to 4d. per sq. ft.; Oregon, 4 x  $\frac{1}{2}$ , 5d.; pitch pine, 8s. 6d. per cub. ft.; Oregon 6s. 3d. to 6s. 6d. per cub. ft.; clear pine,  $\frac{1}{2}$  in. x 12 in., 8d. per ft.; 1in. x 12in., 9d. to 10d.; teak, small planks, 14s. 9d. per cub. ft.; do., large, 15s. 6d.; jarrah, 9s. 6d. per cub. ft.; poplar, 1 in. x 12 in., 10d.; scantling, 1s. 2d. to 1s. 3d. per ft., 3 x 2.

Bricks, cement, lime, etc.: Pretoria Portland Cement, 9s. 3d. per bag; 8s. 3d. truck loads; lime, white, unslaked, 7s.; truck loads, 6s.; slaked, do., 5s.; blue, 3s.; plaster lime, 4s.; bricks, stock, delivered, 37s. 6d. to 45s.; wire cuts, 50s. to 70s.; pressed 70s. to 80s. per 1,000, road transport difficult to obtain; salt and white glazed bricks, £27. 10s. per 1,000; roofing tiles £25 per 1,000; Roman do., £12 $\frac{1}{2}$ ; glazed tiles, 10s. 6d. to 17s. 6d. per yard; paving cement tiles, 8s. 6d. per yard laid; reinforced concrete columns, 6 ft. plain, 22s. 6d., fluted, 24s.; fireclay bricks, £7 $\frac{1}{2}$  to £9 $\frac{1}{2}$ .

'Phone 4673.

Box 3162.

## OSBORN'S STEEL.

Write or 'Phone for Stock List.

**SAMUEL OSBORN & Co., Ltd.,** SHEFFIELD and JOHANNESBURG

at klin, per 1,000, clay chimney pots, 36s. to 70s., according to height, 12 in. to 18 in. per doz.; fire clay, 37s. od per ton on rail.

Oils, paints, lead, oxides, glass, Linseed, raw and boiled, 30s. to 39s. 6d. per five gallons; white lead, 85s. to 96s. per 100 lbs. (big lots are not quoted); turpentine, 51s. 2 1/4 gallons; 10s. 1s. 59s. 6d.; coal tar, imported, 3s. per gall., and 15s. per 5 gallons; oxide in oil, 36s. per 100 lbs.; dry oxide, 22s. 6d. to 27s. 6d.; S.A. crude oxide, 12s. 6d.; linseed oil putty, 4s. 6d. per 124 lbs.; bladders, 36s. casks of 100 lbs.; grease A.F. axle, 26s. 6d. to 28s. 6d. per 100 lbs.; tallow, 1s. per lb.; White Rose paraffin, 18s. 3d. 2 1/2; Laurel do., 18s.; petrol, 28s. 6d. 2 1/4; motor oil, 7s. to 7s. 9d. per gall.; engine lubricating oils, 27s. to 40s. per case; cylinder, 26s. 6d. to 12s. 6d.; paints in tins, 1s. per lb.; British plate-glass, 1 in., 3s. 9d.; do., mirror, 1s. 6d.; window, 16 oz., 1s. to 1s. 3d. foot.

Chemicals: Mercury, £40 per 75 lb. bottle last sale, but now no definite price; bichromate potash, 5s. 6d. lb.; chlorate, 1s. 6d. per lb.; permanganate, 11s. per lb.; alum, 5d. lb.; carbolic acid, 7s. 6d. lb.; borax, 92s. 6d. 100 lbs.; cyanide soda, 1s. 5d. lb.; hypo, 7d. lb.; acetate lead, 77s. 6d. 100 lbs.; litharge (assay), 92s. 6d., (commercial) 58s. 6d. 100 lbs.; zinc sheets and blocks, 1s. 6d. lb.; plumbago crucibles, 5d. per number.

Electrical Goods: Lamps, high volts., British, Holland & American, 28s. to 29s. wholesale, and 42s. to 48s. dozen retail; carbon lamps, 10s. 6d. dozen; pure rubber flex, 6d. to 8d. per yard; 3-20 coils of wire, 30s. to 33s. per do., 3/22, 23s. 6d.; tubing, 18s. to 20s. 100 ft.; keyholders, 6s. to 7s. 6d. each; round blocks, 3 1/2 in., 3s. 6d. doz.; lamp holder cord grips, 13s. 6d. to 15s. per dozen; switches, 5 amp., 21s. to 30s. doz.; British glass shades, 30s. to 40s. dozen.; porcelain shackles, 15s. to 18s. dozen; do., bobbins, 12s. 6d. to 14s. per

100. cleats, 20s. per 100; P.O. insulators, 18s.; motor, 3 h.p., about £35 to £37, new.

In consequence of the daily, and even hourly, variation in prices, the Editor will answer reply-paid telegrams to verify any quotation in our list.

### New Patents.

- 189 Thomas William Stainthorpe.—Improved hygienic anti-nicotine pipe.
- 190 William Teper.—An improved washing board.
- 191 John Hettinger.—Improvements in and relating to aerial conductors for wireless signalling and other purposes.
- 192 Frances Mark Waller.—Improved mechanical tractor for agricultural implements.
- 193 Everard Richard Calthorp.—Improvements relating to parachutes.
- 194 Drakes, Ltd., and Jonas Wilfred Drake.—Apparatus for controlling draught on furnaces.
- 195 Bruce Corklin.—Improvements relating to internal combustion rotary engines.
- 196 Bruce Corklin.—Improvements in and relating to rotary engines, pumps and the like.
- 197 Bruce Corklin.—Improvements in and relating to rotary engines, pumps, compressors and the like.
- 198 Marconi's Wireless Telegraphy Co., Ltd.—Improvements in wireless telegraphy and telephony.
- 199 Bernard Mohr and Christian Feberlein.—Improved treatment of copper nickel matter to separate the metals.

Printing, Bookbinding, Account Books, Tracing Cloth, Transfer Paper, Drawing Paper, Ferro Prussiate, Ferro Gallic, Indian Inks, Rubber Stamps, Stationery of all descriptions, Draughtsman's and Surveyor's Requisites.

**C. E. FOLKEY, Stationer & Printer.**

Ask for a Quotation for Stationery or Printing.

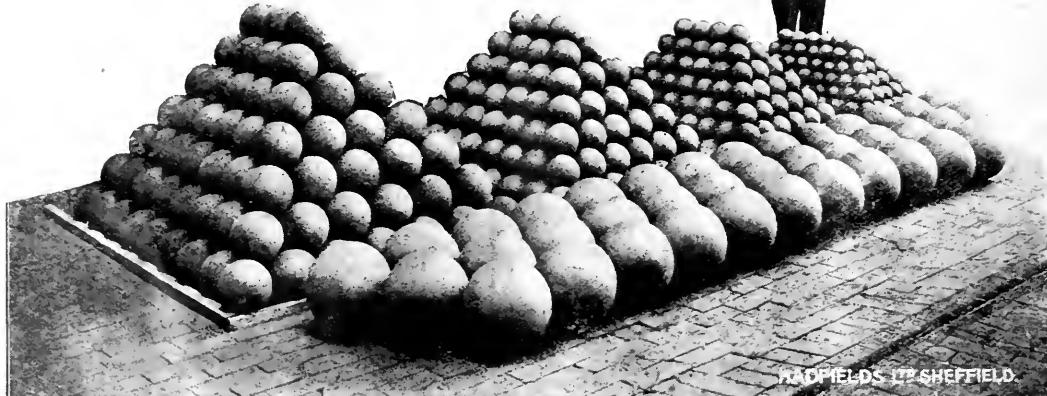
7, MARSHALL SQUARE BLDGS., opposite main entrance Stock Exchange  
TELEPHONE 2065.

## HADFIELDS Ltd.

Hecla and East Hecla Works, Sheffield, England.

Workmen employed over 6,000.  
Works area 125 Acres.

### HADFIELD'S SPECIAL FORGED STEEL BALLS FOR BALL AND TUBE MILLS



**MINING REQUISITES**  
of all kinds.

Sole Makers of HADFIELD'S PATENT  
**ERA MANGANESE STEEL**  
The supreme material for the wearing parts of Stone Breaking  
and Ore Crushing Machinery, Tramway Track Work, etc.

**Complete Stone Breaking  
and Ore Crushing Plants**

Head Office for South Africa:  
46 & 47, CULLINAN BUILDINGS,  
JOHANNESBURG.  
'Phone 5900. Tel. Add.: "Hecla."

Bulawayo Agents:  
WHITMORE & JACKSON,  
17 & 18, Agency Chambers.

Salisbury Agents:  
P. PEECH & CO.,  
Angwa Street.

Natal Agents:  
THOMAS BARLOW & SONS,  
Smith Street, Durban.

## Company Meetings.

### ANGLO-FRENCH EXPLORATION CO.

The 27th ordinary general meeting of shareholders in the Anglo-French Exploration Company, Limited, was held on Wednesday, 4th April, at Salisbury House, London Wall, E.C., Mr. F. A. Robinson presiding.

The Chairman, in moving the adoption of the report and accounts for 1916, said: Gentlemen, it will, I presume, be your wish that we take the report and accounts as read. My colleague, Monsieur Louis Ochs, has asked me to express his regret that he is not able to be present to-day. The uncertainties attending a journey from Paris are such that I am sure you will readily excuse his absence. I regret to say that Viscount Knutsford and Mr. T. Cheney Garfit, the trustees for debenture holders, are unable to be present here to-day. Viscount Knutsford has, I am sorry to say, met with an accident which, I understand from a letter I have received from him, will keep him indoors for some days, and Mr. Garfit has a public engagement which prevents him from being here. It is the third time I shall have addressed you as Chairman of this Company during the continuance of the war. By the side of the momentous events which are happening in the world, and which fully occupy our thoughts to-day, our own affairs sink into comparative insignificance. At the same time we have to "carry on," looking forward to the time, which will assuredly come, when our enemies are beaten, and when normal business will again be possible. The opportunities for engaging in new ventures have, I need hardly say, been very much restricted during the year. The Treasury regulations have become more onerous than ever, so much so that business of any sort has been carried on with extreme difficulty. We have been conducting our business in fetters, but if the Treasury restrictions are going to help to win the war we do not complain. Notwithstanding these disabilities, I think we come before you with what may justly be considered a satisfactory report. The position of the Company shows some improvement over last year, and if you go back to the year before that it shows substantial improvement. By way of comparison, I may remind you that at the end of 1915 our surplus assets amounted to £88,447. At the end of 1914 the surplus was only £3,704, while at the end of last year, as you will see by the report in your hands, the surplus was £130,416, which is the amount after payment of the dividend declared at our last annual meeting, which absorbed about £15,000. I have had the valuation taken out upon to-day's figures, and find it comes out the same as it was at December 31 within a few pounds. I should think, if anything, it is rather in excess than otherwise. I will now deal briefly with the accounts, and if you will turn to the balance sheet you will see that our accounts are placed before you showing for the first time the alterations due to the cancellation of the preference shares. Our capital is now represented by 500,000 fully-paid shares of £1 each. The 500,000 £1 preference shares were satisfied, as you know, by the payment in round figures of £200,000 in cash and the issue of £300,000 4½ per cent. debentures. An amount of £6,840, representing fractions of less than £10, was not issued as debentures, but was paid in

cash, and under the terms of the arrangement ranked against the first drawing: hence the figure of £8,160 which appears in the balance sheet. As you may remember, the annual drawings are to be not less than £15,000 a year, and you will see that the amount drawn at the end of last year, added to the amount representing fractions, make up the first £15,000, thereby reducing the amount of debentures outstanding to £285,000, at which figure they stand in the balance sheet.

#### AMOUNTS DUE TO PREFERENCE SHAREHOLDERS.

The next item of £1,857 represents amounts due to preference shareholders, who, for one reason or another, have not claimed their money. Several of these cases are due to the war; others are due to other reasons. All I can say is that we are anxious to clear off this item, and if anyone has not applied who is in a position to do so, if he will send in his papers he can get his money forthwith. The amount of £1,962 under the heading of "creditors" calls for no comment, being the ordinary items outstanding in the books when the accounts were made up. Interest on debentures, £7,467, represents the half-year's interest due at December 31, and some unclaimed interest and dividends. The note as to liabilities in connection with new business refers to business in hand to which reference will be made later on. On the credit side of the balance sheet we start with £42,600 in cash and Treasury Bills £111,485. The next item, £50,058 in British Government and Foreign Railway and other securities, is about the same as last year, £29,000 of which was in the 4½ per cent. British War Loan. This has been converted into the new 5 per cent. Loan, and the amount made up to £66,500. The largest item is the next one, viz., £618,313 represented by shares in companies and properties in South Africa, where our principal interests lie. Shares in companies and interests in other parts of the world amount to £72,215. Loans in South Africa amount to £8,866, all of which are considered good by the management on the spot, and sundry debtors amount to £5,598, which are just the ordinary amounts outstanding at the end of the year, and which have mostly been collected since the accounts were made up. There are no loans on the Stock Exchange. Every account outstanding at the outbreak of the war has been paid off long ago. Turning to the Profit and Loss Account, the amount received from the sale of shares, etc., is £17,329, which is less than for some years past, but this will cause no surprise. On the other hand, you will note that the amount received in dividends, interest, etc., viz., £88,500, shows a substantial increase, the corresponding figure last year being £74,500. As our funds were reduced from £1,000,000 to £800,000 in the early part of the year, this increase is all the more noteworthy. While the opportunities of going into new ventures are so few, the receipt of this satisfactory sum in dividends may be considered as very refreshing. These two sources of income added together produce a gross revenue of £105,843, or about £3,000 in excess of last year. On the other side of the profit and loss account, the general expenses are much the same as last year, but this year they include about £2,200 paid to members of the staff who are on active service, and a war allowance to some other members of the staff to meet the extra cost of living due to the war. I am sure the shareholders will not grudge this comparatively small amount.

It must be remembered also that our net expenses are largely governed by the amounts we receive in transfer and other fees from companies located with us, and during the period under review such fees have been on a very moderate scale.

#### MR. WILLIAM FRECHEVILLE.

It will also be observed that the amount of general expenses includes a fee to our colleague, Mr. William Frecheville. We came to the conclusion some time ago that it was not fair to expect Mr. Frecheville to give his expert advice on all sorts of propositions placed before the Board for the remuneration he receives as a Director. We have now made an arrangement with him which we believe will be advantageous to the Company—an arrangement whereby he gives us a good deal more of his time. We have power to remunerate a director for special services under the articles, but we thought we had better mention the matter in the accounts, Mr. Frecheville being a Director of the Company; and I may add that Mr. Frecheville himself wished I should mention it. Donations—£432—is a smaller amount than I personally care to see. I hold the opinion that a Company in its corporate capacity has its obligations to support certain charities and funds, the same as individuals. The amount includes contributions to the South African Hospital, to Lord Kitchener's Memorial Fund, and to the Governor-General's Fund in South Africa. Realised losses and amounts written off is this year only £7,378, which is a good deal less than in some former years. It is an item which can hardly be avoided in a business such as this. The legal expenses and other costs of completing the re-arrangement of the capital amounted to £1,100, bringing up the total cost of carrying out the transaction to £1,725. This is slightly in excess of the probable figure I named in my speech last year; but it is money well spent, and shareholders are already reaping the benefit. The interest on debentures—viz., £10,482—ranks directly against the profit, and is not carried to the appropriation account as was done in the case of the preference dividend. In comparing the profit with previous years, this fact must be taken into consideration. Thus, had the same method been adopted this year, the net profit shown in the accounts would be £71,000 instead of £63,500. After allowing for the debenture interest, the balance remaining to credit of profit and loss account is £63,523 8s. 10d., which you will find carried to the appropriation account. This, added to the amount brought forward, makes £107,770 15s. 2d. From this has to be deducted £4,527 15s. 7d., being the interest payable to preference shareholders for the odd period January 1 to March 11, 1916, the latter being the date when the shares were finally cancelled, leaving £103,212 19s. 7d. to be dealt with. We recommend the payment of a dividend of 10 per cent., which compares with 8 per cent. last year. One of the advantages of the extinction of the preference shares which we foreshadowed was that it would give us greater latitude in regard to dividends, and this anticipation we consider is realised on this occasion, besides which we thought, under the circumstances, we ought to distribute as much as possible. After the payment of this dividend and of the various commissions due, there will remain a carry-forward of £48,512 10s. 4d. as compared with £44,247 14s. 4d. the year before. I may add that, if the resolution which I shall subsequently move in regard to the dividend is passed, the dividend warrants will be posted to-night.

I think that is all I need say regarding the accounts. As regards our report perhaps I ought to refer to the fact that this year we are not publishing a list of our holdings. There is little to be said in this subject that has not been said already many times by Mr. Mocatta and myself. I referred to the matter at some length last year, and after what I then said it cannot come as a surprise that we refrain from publishing a list this year. It gives away our business to publish such a list, and after carefully considering the whole question we decided that this year it might very well be omitted. You are getting a good dividend, and you can see by the analysis given in the report that the capital is not only intact, but that we had a surplus as at December 31, of £130,000 over and above the capital, debentures, and all our liabilities of every sort. This is set out so plainly in the report that there can be no doubt in the mind of any shareholder as to the position of the Company, and I fail to see what additional advantage it is to any shareholder to have a list so that he may make his own calculations. He had much better accept the calculations of the directors, coupled with the auditors' certificate. As one of the financial papers remarked the other day, we could not pay the dividend unless the capital were intact—and this is true. I may, perhaps, also add that this Company was not affected by the Government schemes for mobilising certain securities. As regards the South African mines in which our chief interests lie, notwithstanding the war, they have produced record amounts of gold, and I do think this is greatly to the credit of the directors and managers on the spot, who have been working under great disadvantages. The output of gold during the period of the war has been nearly £100,000,000, which has undoubtedly had a great influence upon the money markets of the world during this critical period. The value of the gold produced during the year on the Witwatersrand was over £38,000,000, but the cost of producing it went up considerably. In several cases stores and materials essential to the carrying on of the mines increased in price by 100 per cent., or more—in some instances it has trebled. The extra cost differs with individual mines, but the average over the whole industry, including only such items as are usually comprised under the heading of "Working Costs," is about 1s. 3d. per ton crushed. Two war levies of £500,000 each have been made upon the industry, and if you include the extra taxation, extra cost of realisation, and the other items due directly to the war, the total extra annual expenditure, as stated by Mr. Wallers, the President of the Transvaal Chamber of Mines, in his address delivered in Johannesburg a few days ago, exceeds £3,000,000 per annum. I believe the exact figure is about £3,200,000 per annum. This, spread over the total tonnage, is equivalent to about 2s. 3d. per ton crushed. In round figures it may be reckoned that a 1s. on the working costs per ton crushed equals £1,400,000. It must be remembered that although the cost of production has increased so much, and although the demand for the commodity produced was never so great, the mines get no more for their product, the price of which is, in fact, fixed. In the case of mines producing copper and other metals, the price of the product has gone up with the cost of production, but not so with gold mines. Although the industry is producing some £4,000,000 more gold per annum than before war broke out, the dividends have been reduced by about £1,000,000 per annum. As compared with last year, the falling off was less than £500,000. Will working costs go down after the war is a question one asks.

I think the answer is that immediately after the war no reduction can be anticipated, but that things may be expected to gradually right themselves.

#### NOW TAXATION PROPOSALS

As a small set-off—but a set-off which is thankfully received—it may be mentioned that the Commissioners of Inland Revenue have afforded relief to the British income-tax payer up to the extent of 1s. 6d. in the £ on dividends received from the Transvaal gold mines in respect of profits tax, war levy, and income-tax imposed on the profits of such companies by the Union Government. Since this address was prepared a cablegram has appeared in the Press stating that the special war levy on gold mines is to be discontinued and that the basis of taxation is to be altered. From the brief particulars contained in the cablegram, I find it difficult to form an opinion as to the precise effect these proposals will have on the total taxation of the gold mines, but we have received a reassuring cable from Mr. Dalrymple, our Managing Director in Johannesburg, dated March 31, received by us on Monday. He says: "Finance Minister presented Budget yesterday. Net result estimated at increase £70,000 on gold industry." After all, in these times, the addition of £70,000, if that is the amount involved, will not be regarded as a very serious matter. The white employes on the Rand have responded readily to the call of their country. Some 3,500 have gone to the war by permission of their employers, and many others have gone without such permission. Altogether about 20 per cent. of the white employes are on active service. Such is the loyal patriotic display that as men return from East and West Africa, where enormous territories have been permanently added to the British Empire, they ask permission to come over to Europe to fight, or others seek to come in their stead. In addition to those who have joined the forces, a large number of professional and technical men have given their valuable services to the South African and Home Governments. I may say that our Advisory Engineer, Mr. J. A. P. Gibb, has joined the Royal Engineers' Tunnelling Corps, and has lately left for France. There has been some unrest during the year amongst the white employes, but according to our advices it appears that conferences between the Labour Unions and the Chamber of Mines have resulted in better relations being established and a standing Conciliation Committee has been formed to consider and decide upon any matters requiring adjustment in future. The developments on the Far Eastern Rand continue to afford encouragement for future enterprise. It is a somewhat curious situation. On the one hand, you have the Union Government calling for tenders to take up these properties and provide immense sums of capital to develop and equip them, and, on the other hand, you have the Imperial Government putting obstacles in the way of providing capital for any such enterprises. The Union Government recently called for and accepted tenders for two such mining areas, and I am pleased to tell you we are interested in both businesses. In one case, it is a matter in which we have a considerable interest, as the Rand Klip is included in the deal which is being carried out under the auspices of the Central Mining Corporation. We hold between 40,000 and 50,000 shares in the Rand Klip, and you will remember that operations at the mine had to be suspended shortly after the reef had been reached. The combination of the ground adjoining that very successful mine, the Modder "B." with the Rand Klip and Cloverfield properties, will be known as Modder East, Limited. The arrangements are, however, at present provisional only, and have to be confirmed by the

shareholders of the Rand Klip and Cloverfield Companies, at meetings to be held in a few days' time. This scheme involves the ultimate raising of over £1,000,000, and affords an example of the enormous sums of money required to deal with these deep level properties. The amounts are so enormous that it is almost a necessity that they should be found by co-operation between the financial houses. We are participants in two of these schemes, as we may be in others when they come to be pronounced. It is the participation in these enterprises which accounts for the note in the balance sheet to which I referred in my previous remarks.

#### ANGLO-FRENCH COAL COMPANY.

You may remember that last year I referred to the Anglo-French (Transvaal) Navigation Coal Estates, Limited, in which we hold practically half the capital. This colliery has continued to work satisfactorily during the year, and its output amounted to approximately 375,000 tons, as against 350,000 tons in 1915. Last year I expressed the hope that the arrears of interest on the preference capital would be paid off during the year, and I am glad to say my anticipations have been fulfilled, and from a communication just received from our Johannesburg office, there is every reason to believe that, in addition to the payment of the preference dividend, a distribution will be made on the ordinary shares at the end of the current year, thereby putting on to a dividend-paying basis some 55,000 shares which we hold, which have remained non-dividend-paying hitherto. The Company is a member of the Transvaal Coal Owners' Association, which arranges for the sale and distribution of practically all the coal produced in the Transvaal; and I am glad to say that we bear by cable that the agreement between the collieries and the Association is being renewed for a further period of five years. It seems to me inconceivable that these collieries should ever again enter into a disastrous competition with each other. The trade of the associated collieries amounted last year to about

750,000 tons, and would have been still more but for shortage of railway trucks and difficulties of transport generally.

#### OTHER INTERESTS.

I do not think I need detain you longer, but perhaps I may say that we have several irons in the fire in other parts of the world. Last year we had the pleasure of hearing our Canadian representative, Mr. Tyrrell. Since then he has been actively investigating different propositions in Canada on our behalf, some of which appear hopeful; but, as I said before, new enterprises for which capital has to be found are almost impossible owing to the restrictions imposed by the Treasury. It is a case of casting bread upon the waters in the hope that when the flood of war subsides we may reap the benefit. As to our staff, you will see that 23 have gone to the war, and I deeply regret to say one of them, a young man, Oliver Pendry by name, was killed in action. I also regret to say that the son of our esteemed Head Accountant, Mr. Close, was killed in leading his men into action in France. In addition some 200 others have gone to the front who are connected with companies in our offices. Our thanks are due to our staff in Johannesburg under Mr. Dalrymple, and to our staff in London under Mr. Airth, for carrying on the detail work with efficiency under great difficulties. We have, as you will have seen by our report, elected Mr. Airth to a seat on the Board, conferring upon him the position of Managing Director in London. This was partly done by the Board in recognition of the zeal and the ability which Mr. Airth brings to bear upon the affairs of the Company. Mr. Airth has

been connected with the Company for a good many years, -first in Johannesburg and later in London. You will be asked to confirm his appointment as a Director, which I am sure you will readily do. I do not think there is any other matter I need touch upon, but I may add that I shall be pleased to endeavour to answer any questions which shareholders may wish to ask. I now beg to move: "That the report and accounts as submitted to this meeting be and are hereby received and adopted, and I will call upon Mr. Mocatta to second the motion."

Mr. Ernest G. Mocatta, in seconding the adoption of the report, said the Chairman had reminded them that this was the third occasion on which he had presided at their meetings during the period of the great war. He was sure they all fervently hoped that when Mr. Robinson occupied the chair next year he might do so under more happy conditions, and that the objects for which the British Empire and her Allies were fighting might have been completely attained. As regarded their Company, it was certainly a matter for congratulation that it had passed through this difficult and unprecedented period without material damage and that they were able to tell shareholders that the position of the Company was stronger and sounder to-day than it was before the war broke out. As regarded future business, he thought it was pretty sure that when the war was over, and normal conditions returned, there would be opportunities in many countries for the carrying on of mining exploration and development, which this Company was formed to undertake. Their Company had now existed for more than twenty-seven years. Some of those who were connected with it at its formation were no longer with them; some of them had become older, and he certainly must include himself in that category. But he would like to impress upon them that their Company was still young and efficient, and he hoped and believed that in the ensuing years they would receive tangible proofs of its youth and vitality.

The Chairman, replying to discussion, said it was true that the carry forward was nearly equal to the amount they were paying in dividend; but, after all, they must have some regard to the times. The Directors thought that in paying 10 per cent, they were doing very well. — The resolution was carried unanimously.

The Chairman then moved: "That a dividend of 10 per cent. for the year ended December 31, 1916, be and is hereby declared on the 500,000 ordinary shares of the Company, payable to all shareholders registered on March 20, 1917." — Mr. W. Henderson Clark seconded the motion, which was unanimously adopted.

## STANDARD BANK OF SOUTH AFRICA, LTD.

The 10th ordinary meeting was held at the Cannon Street Hotel, E.C., on April 25, Mr. R. E. Dickinson, J.P., presiding. The Chairman, in moving the adoption of the report, said he thought they might congratulate themselves that the accounts now submitted were in a satisfactory condition. Notes in circulation showed an increase of no less than £274,115, and stood at £1,559,011, the highest figure reached in the history of the Bank.

### INCREASED USE OF NOTES.

A strong and steadily increasing demand for notes was experienced throughout South Africa during the year, and there was a distinct disposition on the part of the public—largely from

patriotic motives—to substitute notes for gold. The Government were actively co-operating with the banks in fostering this tendency, and everything possible was being done to encourage the use of notes for cash payments. The deposit, current and other accounts, standing at £25,338,129, showed a satisfactory increase of £783,000. Drafts outstanding showed an increase of £333,000, and customers' bills for collection were about £800,000 higher at £3,125,630. The total holding of cash stood at £6,146,192, being £682,611 less than the amount held on December 31, 1915, the decrease being due to the general demand for increased facilities as reflected in the figures for advances. The Bank's investments in London and South Africa amounted to £3,679,692, as compared with £1,337,655. This decrease was chiefly accounted for by the fact that certain short-dated Government investments had matured, and the proceeds thereof had been utilised in the expansion of the Bank's advances. The necessary allowance had been made for depreciation, and the investments had been valued at or under the market prices ruling on December 31 last. Bills of exchange had increased by about £1,333,000 to £4,479,611, while bills discounted and advances to customers had increased by about £1,711,000 to £16,259,929. Those figures were perhaps the best index of the actual growth of the business, and the increase might be regarded as satisfactory. The gross profits for the year amounted to £1,040,363, being an increase of about £55,000. Charges amounted to £622,850, being only £2,800 more than in 1915, which, in view of present conditions, might be regarded as satisfactory. Rebate remained practically unaltered; £80,000 had been provided for investments depreciation, and £25,000 had been set aside to provide for writing down Bank premises, leaving a balance of £346,855 to be carried forward to appropriation account. The board recommended the appropriation of £30,000 to the officers' pension fund, and the payment of a final dividend of 7s. per share, making, with the interim dividend paid in October last, 14 per cent. for the year, leaving a balance of just over £100,000 to be carried forward, as compared with £57,000 last year.

### SOUTH AFRICA'S EXPANDING TRADE.

Dealing with the progress of South Africa during the period under review, the Chairman said that trade generally in South Africa had continued fairly satisfactory. The imports of merchandise into the Union and Rhodesia for the twelve months to December 31, 1916, amounted in value to £42,070,653, being an increase of over 2½ per cent. on the figures for 1915. The exports of South African produce, exclusive of native gold, for the same period amounted to £24,157,240, an increase of no less than 47 per cent. These large increases were partly accounted for by the higher prices prevailing, but were to a great extent due to general expansion in business. Of the total increase in exports of South African produce, diamonds accounted for £3,610,000, wool and mohair for about £1,650,000, and coal for £1,200,000. Commercial business in South Africa had been fully maintained, and, speaking generally, money had been plentiful, but the continued upward movement of prices was beginning to press heavily on the salaried and wage-earning classes. The gold mining industry had continued without interruption, and the total output for the year was nearly 4½ millions, the largest recorded in the history of the industry. There had been a marked revival in the diamond mining industry, and the value of diamonds exported from Kimberley had risen from about £160,000 in 1915 to over £4,000,000 in 1916. There had also been a considerable increase in

the output of diamonds from the Transvaal, Free State, and the river diggings of the Cape, and the total export for South Africa during 1916 amounted to 5½ millions. The coal mining industry had been very active throughout the past year, and had shown a steadily increasing output to meet the demands made for bunkering purposes, chiefly by steamers diverted from the Suez to the Cape route. The total output for the Union was over 10,000,000 tons, which was the largest in the history of the country, and represented an increase over 1915 of 21 per cent. in quantity and 27 per cent. in value. Speaking generally, farmers in the Union had had a good year except in the districts of the Cape Province, formerly devoted to ostrich farming, where the collapse of the feather industry, followed by severe drought, had adversely affected some farms. Shipments of meat to the European market, valued roughly at £100,000 for the year ended December 31 last, as compared with £166,112 for 1915, had proved remunerative, and strong efforts were being made to put the business on a permanent basis by ensuring regular and adequate supplies.—Sir David M. Barbour seconded the resolution, which was carried unanimously.

## MODDER DEEP LEVELS.

The annual meeting of the Modderfontein Deep Levels was held at Silesia Buildings on June 13. Mr. H. Newhouse presiding over a large attendance. Among those present were Messrs. H. C. Boyd, V. J. Ronketti, W. R. Crowhurst, F. W. Baxter, J. R. Nicholson, B. H. Davis, J. H. Brown, W. T. Birch, D. C. Greig, A. Holand, A. F. Lyall, W. Ross, G. C. Fitzpatrick, W. Gordon, J. F. Ferguson, and A. Wilk.

The share representation was 500,000.

### The Chairman's Speech.

In moving the adoption of the report, the Chairman said: The success which has continued to attend the operations of your company during the past year makes my to-day's duty a very pleasant one. The period I have to review has been marked by further progress in every direction, as you will have seen from the monthly and quarterly reports which have been regularly issued and the reports for the year of the directors, consulting engineer and general manager. Chiefly as the result of the additions to the plant which came into operation during the latter half of the year, the tonnage milled exceeded that of 1915 by 61,000 tons; and I would direct your attention to the very high stamp duty reached of 22 6s. tons per day, which, when coupled with the high percentage of running time, is as high as, if not higher than, any other plant of similar size on these fields. The average yield, at 37s. 9½d. per ton showed a gratifying increase of 3s. 4½d. per ton over that of the previous year; while for the first five months of the current year the average has still further increased to 38s. 5½d. per ton. Equally gratifying is the decrease of 9d. per ton milled in the costs, which I should like to make clear inlude not only 1s. per ton for mine development but also all gold realisation charges, compensation payments under the Miners' Pithis Act, war bonuses to employees, and allowances to the dependents of employees on active service; in fact, everything except capital expenditure proper. When it is borne in mind that the various increases due to the war amounted at the end of the year to a total of 1s. 6d. per ton milled, according to your consulting engineer's estimate, the 1916 average

home for the duration of the war, and I can only say to you that you are not being asked to do this only, and I expect that you will be able to do it in your best interest. At present we are faced with a great difficulty in connection with the war, the cost of living having increased, which to date, on May 1, was 10 per cent. The same sum was also added to the cost of stores, so that the cost of stores has increased by 20 per cent.

### The Working Profit.

The working profit of £486,963, or 21s. 6d. per ton milled, was respectively £11s. 1d. and 1s. 1d. per ton more than that of the previous year, the highest monthly total being £16,916 in Aug. 1916, and the highest rate slightly over 26s. per ton milled in December. The current year's operations have yielded a still higher average, the working profit of £222,677 to May inclusive being at the rate of over 22s. per ton milled. After adding sundry revenue from rents and interest amounting to £6,173, which was £4,896 in excess of the 1915 figure, and deducting working expenses, Government taxes and donations to charities and war funds, there remained a net profit of £129,891, or £137,49 more than at the end of the previous year. Capital expenditure, etc., was £6,239,297, leaving £268,140 available for distribution. In view, however, of the increase of £37,237 in the value of stores carried and the desirability of pursuing a conservative policy in these times, your directors decided to distribute only £35,500, or 6½ per cent, increasing the carry forward from £7,507 to £8,462. You will realise that a total dividend of 1s. per share could have been paid. For the current half-year it is anticipated that profits including interest will total £271,000 as against which capital expenditure, etc., will absorb, say, £20,000 and taxes £32,000, leaving for distribution £219,000. The company is therefore in a position to pay a dividend of 8s. 6d. per share. The amount invested in stores has, however, been further increased by about £11,600 and the directors have therefore decided to distribute 8s. per share. During the second half of the year no further substantial increase in stores is expected and capital expenditure should be considerably less. Though to pay this is always dangerous, and particularly so in these times, I think it is legitimate to hope that for the reasons above given the dividend for the second-half of this year will show a further increase, unless anything unforeseen occurs. The expenses again include the special war levy, your company's share of which amounted to £24,147, or somewhat less than estimated in the accounts before you. This war levy it is proposed to continue in a somewhat different form during the current year as you will have seen from the new taxation proposals of the Union Government, which, if carried into effect unchanged, will impose upon gold mining companies a permanent dividend tax (in lieu of the profits tax) at the rate of 1s. 6d. in the pound, which during the war will, however, be 2s. in the £, while the old 10 per cent. profits tax will be reduced to 5 per cent. As far as can be foreseen on these proposals, if adopted, will not have an important effect on this company. Your consulting engineer, in his report for 1915, estimated that the capital expenditure to be incurred during the past year would not exceed £31,000, but, owing to the continually increasing cost of materials due to the war, the actual figure was £78,359, of which £30,88 was in connection with the increase in the capacity of the reduction plant to 10,000 tons per month and £7,202 was for additional housing accommodation, a recreation hall and a swimming bath for the employees. In addition

a total of £5,696 was spent on excess development. At the time of writing his report, which is before you, your consulting engineer estimated that the capital expenditure during the current year would be chiefly in connection with the new 65-drill compressor, and in new housing accommodation and could amount to less than £25,000; but for the first half of the year your Board has decided to make further improvements at a cost of the cost of about £30,000. It is anticipated that these will be completed within about three months hence and will have the effect of enabling the tonnage milled to be increased by about 1,500 tons per month, and the monthly profits by about £1,500. I may say that the mine is well able to supply this increased tonnage, and the reduction works should deal with it without difficulty.

### Development Figures.

I feel sure one of the most satisfactory features in the reports before you will have been the amount of development work done during the year, and the value of the ore disclosed thereby. The total of 6,134 feet was 73 per cent, greater than that of 1915, and was much more than sufficient, both in tonnage and in value, to maintain the ore reserves position, as you will have observed from the figures published, which showed the gratifying increases of 650,000 tons and 5 inches in this while the value was also somewhat higher at 8.4 dwt. The 3,520,000 tons developed at the end of the year are sufficient to feed the present mill for approximately seven years, and their profit value exceeds very considerably the market capitalisation of the company. Since the end of the year development has continued to a highly satisfactory, the footings simple aggregating 2,105 feet, of a value of 12.9 dwt., over 50 inches, the aggregate in accordance with the custom of the company including both the pay and unpayable footings. It is appropriate at this point to call attention to the important influence on the total ore contents of the mine and therefore on its life of the increase in the calculated stoping widths. The increase of 9 inches during the last two years means approximately one ton per claim. In response to the suggestion made at the last annual meeting of the workings has this year been added to the annual report. I would also point out your company's further reserves against accidents of various kinds. Its excellent position as regards stores I have already mentioned to you, but it may have escaped your notice that as an insurance against possible breakdowns in hauling your company has a considerable quantity of payable ore from stopes and development faces dumped on the surface. At the end of last year there were 186,200 tons so dumped, which stood in the company's books at £30,000. In addition to this, the large amount of development work done has placed your company in a strong position in the event of any shortage in the supply of native labour arising. During the past year this supply was at all times sufficient for the mine's requirements, and the health of the natives was remarkably good, the death rate from disease being only 4.8 per 1,000 as compared with the average of 13.2 per 1,000 for the Witwatersrand mines in general. The death rate from accidents of 1.9 per 1,000, though not as good as that for 1915, also compared very favourably with the average for the Rand, which was 3.27 per 1,000. Your company has continued to make allowances to the dependents of those of its employees who are on active service, and has to date expended a total of £5,226 under this heading. Fifty-two employees, equivalent to about 24 per cent, of the white labour complement, have enlisted, of whom Mr. John Martin, I much regret to state, has been killed in action, while three have been wounded. We trust they will soon be restored to health. Mr. P. M. Anderson, who has been for many years intimately associated with the group of mines in which your company is included, was appointed consulting engineer as from January 1 last.

The report and statement of accounts were adopted unanimously.

### E.R.P.M.

Mr. E. A. Wallers, the chairman of the East Rand Proprietary Mines, Ltd., presided at the annual meeting on June 13, and in moving the adoption of the report of the directors and the statement of accounts, said:—Gentlemen.—The European representation at this meeting is, unfortunately, not as complete as usual because, although the reports were despatched from here to London early in March, the irregularity of the mail service has prevented proxies reaching us in time for this meeting. I regret that such a situation has been created, but it is unavoidable in the present conditions. The accounts before you do not call for any extensive comment. From the revenue and expenditure statement you will have noted that the gross working profit for the year amounted to £497,165, which is £103,826 less than for 1915. The expenditure on authorised votes, donations, debenture interest, miners' philthsis compensation, war leave, amounted to £162,532, and the revenue derived from rents, interest, etc., was £29,887, leaving a net expenditure of £132,645. Deducting this from the gross profit of £497,165, the net profit, viz., £334,529, carried to appropriation account is arrived at. The balance unappropriated at 31st December, 1915, was £193,353, which with the net profit of £364,529 and sundry items amounting to £23,450 gives a total of £541,823 available for appropriation. It will be seen from the appropriation account that £61,147 was distributed to shareholders—equal to a 22 per cent. dividend—that Government taxes amounted to £29,616, that expenditure on capital account, on undemining rights annuity, and on redemption of debentures, absorbed £175,391, and that the balance unappropriated is £315,169. This balance is represented by £89,855 cash and by £24,314 cash assets, in which is included stores and food stuffs to the value of £169,934. You will observe on reference to the balance sheet that, in addition to the substantial balance of the appropriation account, the cash to the credit of the mine development suspense has now reached £357,566. This sum together with your cash and cash assets referred to above, and after providing for all current liabilities, totals to £672,735. A portion, namely £350,000, of our cash resources has been invested in Imperial securities, i.e., £250,000 in the War Loan recently issued and £100,000 in exchequer bonds. This investment will, I know, commend itself to you as the obviously right thing to have done. The debenture liability has been decreased by £108,160, reducing it to £1,043,080. The purchase of debentures was made at an average cost of £7s. 6d. 5d. per cent.

The expenditure on votes was confined mainly to work carried out underground in the Hercules and Anglo-Deep sections, where, as you have been previously informed, the bulk of the expenditure will in future be incurred. The actual amount expended was £133,458, which is £23,593 less than the sum authorised, but this does not imply that a saving has been effected as it simply means that the programme of work contemplated had not been completed at the end of the year. Before leaving our review of the accounts, I would say a word or two upon the cash position. This is undoubtedly a satisfactory feature in the otherwise very difficult position of your company. It is clear, however, that the substantial reserve fund

we have accumulated will certainly be none too much for the work necessary to perform in order to ascertain whether or no we have a payable mine in the present unexploited southern area of our property. This fact must always be in mind when contemplating the cash position.

## Working Results.

As regards the working results, the tonnage milled was 1,930,240 tons yielding £1 4s. 4d. per ton, which is a decrease in tonnage of 44,430 and in yield of 9.2d. per ton milled compared with the previous year. The working costs amounted to £1,567,914, or 19s. 3d. per ton milled, an increase of 21. on the previous year. An analysis of the working cost position for 1916 as compared with 1913—i.e., the pre-war year—shows that the rise in the price of stores accounts for approximately £100,000, timbering and rockwalling for £52,029, handling of water for £28,309, and sandfilling for £19,933, amounting altogether to £200,271, which is equal to 2s. 9.8d. per ton milled. In addition there have been extraordinary disbursements attributable directly to the war of approximately £103,674, made up as follows:—

Increase of cash assets . . . . .	£41,481
Special War Levy . . . . .	9,255
Gold realisation charges— estimated . . . . .	20,421
Allowances to employees on active service . . . . .	22,917
	£103,074

Leaving out many smaller increases in various directions, the additional cost and extraordinary expenditure therefore amount to £33,345 as compared with conditions for the year 1913.

The supply of native labour was fairly good in point of numbers throughout last year, but at the present moment is decidedly short. The usual very undesirable fluctuations in the labour supply have taken place, and from the standpoint of the efficiency of the hand-drilling native who produced 87.6 per cent of the rock sent to the mill—there has been a very marked decrease in efficiency. Continuous experiments with the small machine drill, especially of the hammer type, have recently given encouraging results; we therefore propose, in view of this fact and of the fact that the native labour supply is to-day very short, to instal as far as possible the small hammer type drill. To get an adequate supply of these small drills under present conditions will, however, be very difficult.

### The Rush of Water.

The amount of mine water raised during the year reached the record figure of 1,471,000,000 gallons, being an increase of 129,000,000 gallons on last year's total. The additional water which had to be dealt with came from the 27th level crosscut, where a volume of nearly 5,000,000 gallons per day was struck during November last, but this source being now under control the daily quantity raised from the mine has dropped back to the normal amount of between 2 and 2.5 million gallons per day. I may here mention, as you have been advised in the quarterly reports, that Mr. Francois arrived on the property towards the end of March, and after an investigation of the position has intimated that his process for sealing off water conveying fissures can be applied

with success in our country, as required. Unfortunately, Mr. F. G. Foss's plant has been very delayed, and up to the present the efficiency of the process has not been demonstrated. His plan for liquid cement will, however, show array, and a test will be made, which I trust will prove a satisfactory invention, confirmed by ample proof. It thus becomes the duty of the world to assist the progress of this work.

The total cost of the  
mine for the year 1945  
during the first 10 months  
was, which is in great contrast  
for the previous year. At the pre-  
sent rate of filling 1,280 tons  
a working day, the quantity will  
approach a million tons for this year.  
I have already referred to the future  
additional cost entailed in respect of this  
item, but the money is well spent on the  
safety measures which are essential.

## Development.

Dealing with the development working during 1916, the total footage during that year was 44,171 feet, being 8,000 feet less than during 1915. Although the development effected during last year was what may be described as "selective development," that is, the work was only done in areas where indications of payable reserves were the most promising the results obtained have continued to be most disappointing, as you will have realised from the complete information that has been regularly supplied to you. The percentage of payable ore developed was 38 per cent., being a decrease of 9 per cent. as compared with 1915. The total payable tonnage developed during the year amounted to 585,000 tons only, or 600,000 tons less than the quantity taken from the ore reserves during the year. The result is that our payable ore reserves per December 31 last were still further reduced to 4,260,000 tons, of a value of 6.1 dwts. per ton. As regards development since December 31, 1915, I regret to say there has been no improvement in the values expended by work carried out during the current year, and in fact the percentage of payability indicates a still further decrease.

A summary of the footage driven and values exposed during the last four months is as follows: Payable: 2,650 feet, with a value of 14.0 dwt., over 33m. Unpayable: 4,170 feet, with a value of 3.8 dwt., over 24ft.

The following are the salient features in the various sections:-

DRIEFONTEIN. On the 23rd level west the good values obtained south of the fault have not continued; on the 25th level the values are as follows: Payable: 165 feet, with a value of 14.3 dwts, over 17ft, Unpayable: 255 feet with a value of 7.9 dwts, over 4ft.

ANGELO Driving on the lower section of reef on the 25th level west has been continued, though the previous groyne values have not been maintained, the average for the road being over 50 inches for 50 feet. The road, extended on the 26th level has been completed.

Mr. N. Diving has been rated to be 2nd in 3000 ft. gas drives. N. probably always have been exposed.

**HERCULES** The soldiers here on the 32nd 1863, before the end of the year are at first sent to the rear, never for 700 ft. A few of the wagons which stand on the roadside are sent to the proximity of works.

ANGELO LIPPI. The 21<sup>st</sup> west is being counted for the most part at the foot of the reef, and shows any increase of water, which no region is found on the footwall of main reef barrier. The 23<sup>rd</sup> west has shown better values of late, the average over the last 100 feet driven being

1500 square feet per 24 inches. Payable rent has been assessed on the 31st level at the case of the shaft, the values being 49.9 dw's over 13 inches for 200 feet driven to date.

### Southern Areas.

There is a complete picture as I understand it given you of the development position to date, and it is a dismally bad and indeed a very grave position that we are in. Since we have however been so kindly supplied with very full and accurate details of the position of the water, I have now had time to consider the matter and to work out a programme of development which I hope will be of interest to you. I will now explain this programme. I will first consider the 2nd cross-cut. You will remember that on the 1st and 2nd meeting I told you on blue lines the plan which the consulting engineer had prepared before the Board, and which we adopted, for the most rapid exploitation of the cuttings etc. The work on the two cross-cuts etc. to last you proceeded with great rapidity and efficiency until in the crossing from the 27th level of the Angelo Deep we encountered a huge volume of water. Further progress there was impossible. Subsidiary dams were built, and the water has been held. Meeting with this additional great quantity of water was a keen disappointment to all, and it effectively put a stop to the carrying out of the scheme in development scheme as it was set out. A modification of the scheme, therefore, became necessary, and our consulting engineer, Mr. R. C. Werner, studied the whole problem anew, and thereafter submitted to the Board an exhaustive and carefully considered report. Mr. Werner was quite definite as to the necessity of exploiting the cuttings which are with as great rapidity as possible and the modifications he suggested which have been adopted can be summarized in the statement that it is necessary by sinking of a circular shaft from the surface to the elevation and in the proximity of the point where the subsidiary shaft will be sunk. Our original intention, as I have said, was to drive two cross-cuts out to a point of intersection where the subsidiary shaft will be sunk. However, we were obliged to discontinue the driving of the 27th cross-cut owing to the water troubles, and therefore the 27th cross-cut only will be driven to meet the shaft sunk from the surface. I do not wish to confuse you with too much detail of this scheme of development, but give you a few modifications thus briefly, and would add also that the sinking of the circular shaft from the surface will provide excellent ventilation for the development workings from the subsidiary shaft, and will also serve as a means of access for hoisting the cageage to the surface from this deep level and will develop it. Having in mind this is a new fact, it is estimated that the modified programme now adopted will not in the end prove any more expensive than the original programme.

### The Problem of the Mine.

from the nature of the lay out, lend itself to a gradual reduction of operations at a profit that is we cannot profitably work in a small scale tonnage. We have, therefore, if possible, to keep our mills supplied with a tonnage of about 160,000 or 170,000 tons a month, and any rock that will produce a small profit, no matter how small, must be brought under review. With this end in view, therefore, we are adopting, on Mr. Warriner's recommendation, the following measures:

(a) Large to increase the development operations in the Blue Sky area, above the 3,000 feet level, which has so far only been developed to a very small extent. The indications of the percentage of payability in this area, although low, are not lower than the percentage of payability now being met with in the development of the central deep section.

(b) To open up the Blue Sky area below the 3,000 feet level and east of the Cinderella Consolidated eastern boundary, in the neighbourhood of which the latter company obtained a percentage of payability which was quite satisfactory. As regards the development of this area, we are indebted to Sir George Abu and the General Mining and Finance Corporation for certain facilities they are willing to give us enabling us to attack this ground from the levels of the Cinderella Mine that are close to our boundary.

(c) To open up the old workings in the upper levels of the mine in order to obtain, first, the tonnage in the many isolated ore reserve blocks that are scattered through these old workings; second, any payable reef that may have been left in the hanging or footwalls of the worked out stope; third, tonnage from blocks at present excluded as unpayable but which, on a close investigation, have been found to contain portions which will give a payable tonnage. I would add here that the tonnage that will be obtained from any blocks at present in the unpayable reserves will be on a system of sampling and investigation which will be most thorough and complete.

These are the means, therefore, which we intend to carry out for keeping up the profitable tonnage to as high a level as possible and so enable us, we hope, to carry on through the long period that will intervene before we know whether a payable mine can be developed in our extensive southern areas. It requires, as you will realise, an adequate supply of native labour, and, clearly, added expenditure on development account which will have to be met out of working costs. It must be borne in mind that if the hopes we have either as regards native labour supply or the percentage of payable rock to be met with in the areas that I have referred to are not fulfilled then the continuance of working at a profit during the whole period of waiting will be rendered impossible. We have the hope, however, and it is a reasonable hope, that with fair conditions and with moderate good fortune we shall just be able to tide over the period until we know definitely whether or no the undeveloped southern areas contain a payable mine. It will be quite clear to all—indeed, I take it it has been quite evident for some time—that there is no prospect of this company paying dividends for some time to come. If we develop a payable mine in the southern areas, that is another matter. On the other hand, I feel sure that all will agree that the policy of thoroughly testing our southern area (that I have outlined) is in the best interests of debenture holders, shareholders, and this country and community as a whole. It should be remembered here that this company spends annually, in round figures, a million a year on white and native wages and, over £750,000 a year on stores, etc.

I desire to place on record the regret of the board at the resignation of Mr. W. T. Anderson, the superintending engineer to the company, after five years' very hard and loyal service rendered, which were very keenly appreciated by us. Mr. Anderson's health was causing him some anxiety, but I am delighted to

know that he is now quite fit and able to carry out important war work in England. We wish him every success in that work. Mr. R. C. Warriner has been appointed consulting engineer. The management, officials and workmen have continued, under most difficult and trying conditions, to give thoroughly loyal and good service. The workmen's committee continues to perform a most valuable function, and the understanding that exists between the management and the employees is of a most desirable character. I have no hesitation in saying that the position is due, very largely, to the work carried out by this workmen's committee.

Large numbers of our employees continue on active service, and I regret very much to inform you that 11 men have given their lives to the cause. Our respectful sympathy is extended to their relatives. We have to record, with regret, the death of Sir Sigismund Neumann, Bart., a member of the European committee of your company since its inception. I now beg to move the adoption of the report and accounts for the year ended 31st December, 1916.

Mr. Renaud seconded the motion, which was carried unanimously.

The retiring directors, Sir H. Ross Skinner, Messrs. J. Friedlander and J. Jourdan, were re-elected, and the auditors, Messrs. C. L. Andersson and Co., and A. E. Page, were re-appointed, their remuneration for the past audit being 70 guineas each.

There were present Messrs. F. Raleigh, W. J. Gau, E. Renaud, J. Jourdan, A. S. Milne, G. C. Fitzpatrick, A. G. Gill, A. F. Mullins, J. Walde Peirson, W. H. B. Frank, C. Peirson, L. Misch, J. Littlejohn, J. E. Grievson, H. P. Fraser, T. Lynch, M. Kneen.

## WIT. TOWNSHIPS.

The annual meeting of the Witwatersrand Township Estate and Financial Corporation was held in Jeppe Arcade on June 13. Mr. Julius Jeppe presided and the share representation was 60,780 out of a total issued capital of 200,000 shares. In moving the adoption of the report the Chairman referred at the outset to the deaths of Mr. J. H. Ryan and the Hon. A. G. Braund, a member of the London Committee.

Proceeding, the Chairman said:—You will remember that in 1913 it was decided to hold our annual meeting in June, so as to give oversea shareholders an opportunity to scrutinise the financial statement and directors' report before mailing their proxies; unfortunately, owing to the exceptional conditions prevailing here, and to the irregular dispatch of mails, it was impossible this year to adhere to this practice, and we therefore thought it only fair to give no preference to South African shareholders over those across the sea, and decided to circulate the documents at this meeting, by which time the European shareholders should also be in possession of their copies. Well, gentlemen, from these documents you will have seen that in spite of the continued abnormal conditions, the ordinary profits made during the year, namely, £19,019, are within a few pounds of the previous year's profits, our income from all sources being £842 more in 1916 than in 1915; against this, however, our current expenditure has been increased by £874. Of this, £498 is accounted for by moneys spent on developing "Kew Township," in which we hold a half interest. We might perhaps have called this the "Kew Township Development Account," and shown it amongst the assets in our books, but your directors thought it wiser to deal with it in the way now shown in the accounts: then additional donations and contributions and service allowance are creditable responsible for the remainder.

Six members of our staff are serving with His Majesty's forces, drawing a

total allowance of £670 a year. I am glad to be able to state that although several have been severely wounded, no death has been recorded, and I am sure you will join me in thanking them for the service they are rendering, and in wishing them a safe return after victory has been achieved.

## Question of Income Tax.

In 1915 we carried forward a balance to appropriation account of £19,051, whereas this year we only carried forward £11,551. The difference is accounted for by two debits to profit and loss account; the first is an amount of £1,582 for the year's income tax. In the previous year no entry for such a tax appeared in our accounts; were we under the impression—and still are—that, in view of the very heavy losses sustained by us in depreciation of our properties, no income tax would be chargeable; but the revenue department does not share this view, and the question is being brought before a special Court appointed for the purpose of adjudicating on disputes of this nature. In the meantime, however, we have considered it advisable to provide for all possibilities, and have therefore debited the amount claimed for the year under review to profit and loss account, and that of the previous year to share premium account. The position is therefore, as explained in the directors' report, namely, that, pending the decision of the Court, the income tax for the year 1914-15, i.e., £1,372, leaving out shillings and pence, has been debited to share premium account, and income tax for the year 1915-16, i.e., £1,582, has been debited to profit and loss account, and the two amounts, making a total of £2,955, appear in the balance sheet under "sundry creditors." The second item is one of £5,885 for depreciation. Formerly such debits were made against appropriation account instead of profit and loss account. The reason for this I fully explained to you at the time. There is one further item in the profit and loss account to which I would like to draw your attention, namely, the charge of £3,952 for rates and taxes. Of this amount £2,359 represents municipal rates for the half year ending June 30, 1916. This has been paid, as has also an amount of £327, not disputed for half-year ending December 31, 1916. The balance, £1,266, is the estimated amount we may still have to pay for the period July 1 to December 31, 1916. On July 1 of last year a new valuation roll came into force, which, in the opinion of most of the township owners, was framed on unjust and inequitable lines. Appeals against these valuations were considered by a Court appointed by the Town Council of its own members. It will not appear strange that this Court's decision did not satisfy us, and we, with other township companies, appealed against it to the Law Courts of the Union; nor is it strange that our contentions were, in nearly every instance, upheld by those Law Courts, with the result that a special Court has now been appointed for the purpose of revaluing our properties on the basis of our contentions.

## Attack on Vested Interests.

This is only one more proof of the opinion expressed by me in previous years, that vested interests in property and land are still being vigorously attacked and singled out for special spoliation by certain sections of the community. Needless to say, fighting against these endeavours has caused your directors a considerable amount of anxiety and worry during the year. I will not take up your time by recounting our labours in protecting your interests against unjustifiable attacks and attempts to make land valueless, and to nullify legal contracts. To some extent, anyhow, our exertions have met with success, and I sincerely hope that the forthcoming Provincial Council elections will result in the return of a majority of members who will show more sympathy with vested landed interests and a fairer and more equitable disposition to deal with them than has been evinced in the past. The other items in your profit and loss account do not require elucidation; they speak for

themselves; nor does your balance sheet call for special comment. The items appearing therein are fully explained in the directors' report, but perhaps I might allude to one or two of them. First, there is the amount of £184,915—share premium account. I have in former years referred to the fact that although this is shown on the debit side, it does not in reality constitute a liability, and your directors have lately discussed with your auditors the advisability of transferring the amount to a special reserve account, from which should be deducted, in future, any amounts which it may be found necessary to write off for depreciation in any of your assets. We have also, as you will notice, made necessary provision for depreciation in your fixed property and in your investments in shares, the latter appearing at £86,437, which is less than their intrinsic value. A list of them is on the table, and in it you find a large parcel of shares in the Malvern Township Company.

### A Little History.

Some of you will remember that this company was floated many years ago in times when land was of considerable value and prospects of selling it were good. Of the capital of £300,000 your company held about half, the other half being held in Amsterdam. Shortly after flotation land began to fall, and the hopes of disposing of this ground at remunerative prices were not realised. We then made representation to the other shareholders for reduction of the capital, in conformity with the shrinkage in the value of the company's assets, but without success, and it is only lately that we have arrived at an amicable arrangement, by which the share capital has been reduced to £50,000. The bond resting on the property and other debts have been liquidated, and your company holds rather more than four-fifths of the issued capital. This necessitated, however, the outlay on your behalf of about £11,800 in cash. It is confidently expected that a considerable revenue will accrue in the future to this company from the Malvern township, which has become a popular suburb, in which transactions in stands are fairly active. Investments in property have been written down to an amount which, we consider, represents their value at the 31st December, 1916. Bonds and loans, standing at £108,182, are all secured and return a fair rate of interest. In conclusion, I would just like to say that although the year under review has not on the whole been an unsatisfactory one, it has been full of anxiety. It is a great disappointment to the directors that they cannot recommend the declaration of a dividend, but it is considered in the best interests of the shareholders to conserve our resources in every possible way, and strengthen our financial position. No one can tell what the future will bring forth, and I can only express the sincere hope that shareholders will soon be compensated for their present disappointment in not receiving a dividend.

The report and statement of accounts were adopted.

### UNION TIN.

At the first general meeting of the Union Tin Company held on June 11, the Chairman, Mr. F. T. Richards, said: Before dealing with the business for which the first statutory meeting of shareholders is called I wish to give a brief account of the property and the present position. Your property consists of a lease, with option to purchase, all the mineral rights of the farm Roedewal No. 1948, 1,540 morgen in extent, situated on the Olifants River, 50 miles east of Naboomspruit and 100 miles north of Middelburg, from which centre I understand the Railway Administration contemplates building a line to Pietersburg, which will pass through your property or very near to it, when the war is over. In February Mr. G. A. Troye, well known on the Rand as a consulting

engineer, reported that he had no hesitation in saying that promising occurrences, with every appearance of permanence, had been opened up, and that he would not have advised the erection of a plant if he had not felt sure that this was warranted. He concluded: "The thing is going to be very satisfactory." I have laid upon the table a preliminary report by Dr. Percy A. Wagner and a report on the ore by Professor Stanley. On page 2 of Dr. Wagner's report on the exposure in the eastern section he states that visible cassiterite occurs over a distance of 40 feet measured along the apparent strike and 20 feet measured at right angles to this. I am happy to be able to add that there is now no longer any doubt that in this area we have a very large ore body indeed; for, during the work of excavating the floors for the smelter site, about 200 yards from the point mentioned by Dr. Wagner, we have cut the lode again at a depth of only 20 feet exposed as a very strong dome-shaped ore body apparently equally as wide and of identical nature to that mentioned above, giving us a large tonnage of ore within a few feet of our battery site. Professor Stanley reports with regard to the ore taken from this eastern section that a picked sample assayed 15.9 per cent and that a composite sample representing ore of probable value for treatment taken from all parts of the property assayed 2.56 per cent metallic tin. He adds that the rich sample gave an extraction of over 90 per cent, and the result obtained from the composite sample indicated that with a comparatively simple plant about 70 per cent. might be anticipated, i.e., 2.56 per cent of 70 per cent. concentrates. The composite sample was made up of ore taken under Dr. Wagner's supervision from all sections, some of which may prove a little more difficult to treat than the ore from this eastern section, to which it is proposed to confine our attention for some time to come; and I think we may rightly assume, therefore, that if a recovery of 70 per cent. of the assay value may, in Professor Stanley's opinion, be anticipated from the composite sample, then at least this percentage of recovery can be confidently expected from the richer and cleaner ore from the eastern section, and this is confirmed by a report made in February of this year by a practical tin dresser who has had many years experience at his work in Cornwall. He writes as follows:—"I have sampled all the dumps of ore at grass and I estimate there is 15 to 18 months' crushing for the battery you are erecting and that the average recovery will be not less than 2 per cent.—this could obviously be increased to, say, 3 per cent, if desired. The quality of the concentrates obtained by the vaning shovel go about 55 to 60 per cent., and there does not appear to be any mechanical difficulty in bringing them up to, say, 70 per cent. metallic tin." Our geologists having agreed upon the wisdom of erecting a plant, we decided, upon the advice of Mr. Troye, to call in Mr. E. R. Cochrane, manager of the Groenvlei Tin Mines, and I am happy to say that Mr. Cochrane's opinion we're in agreement with Mr. Troye's, and cordial thanks are due to Mr. Cochrane as well as to Mr. Troye for the very valuable services he has rendered by giving his carefully considered advice, not only as to the best site for the erection of the plant, but for detailed instructions in carrying out the erection. Mr. Cochrane is manager for Mr. G. W. Compton, who very kindly gave me permission to avail myself of these services. The original battery of five 750lb. stamps was condemned, being considered too light to give the best recovery, and a battery of five 1,050lb. stamps has been erected. No loss was entailed, as almost every scrap of the original plant has been found of use. Roads have been con-

structed and houses for the company's workmen, and a large dam is just about completed, the core of which is of granite laid in lime and faced with cement, 8 feet wide at the foundation and tapering to 2 feet at a height of 10 feet and extending across a spruit, which is one of the main feeders of the Olifants River, for a distance of 200 feet. It is hoped that the water conserved thereby will prove sufficient for the present plant. If development warrants a larger plant being installed the question of laying a pipe line from the battery site to the river, a distance of little over two miles, will be considered, and from this source a never-failing supply of water can be obtained, while we have other subsidiary supplies in close proximity to the battery site and dam. It is difficult to give a close estimate of what the plant will handle per month. The duty per stamp will depend upon the mesh of the battery screens, which cannot be decided theoretically beforehand, but only by a practical test of the plant. In the tin dresser's report, previously referred to, he recommends that if we are going to draw ore from all sections of the property we should crush to 400 mesh; Professor Stanley recommends even finer crushing if one from all parts of the property is treated. As it will be possible to deal with the ore in the eastern section only we hope that it will not be necessary to crush so finely, and if this prove to be the case it is thought that 20 tons per day will be fed to our concentration plant, which, with our low working costs, must show the company a handsome profit. A few remarks in regard to the nominal capital and the price at which the shares stand in the market. The company was originally contemplated to define certain private interests. It was decided, however, to make it a public one, and I am glad to say that the shares of the company are now held, not only in Johannesburg but also in Capetown, Durban, and Pretoria and it is chiefly for the benefit of these widely distributed shareholders that I have gone into these details. I think the premium of 2s, at which the shares now stand is a modest one. For this is no prospecting speculation. We have examined a large area of country and have fortunately opened up with our own money, some very rich ore deposits and we have registered a company with a nominal capital which represents less than the actual amount expended. And neither your directors nor your consulting engineers have taken any payment for their services. We should have been justified in handing over to a company with a nominal capital of five times that at which it has been registered, in which case the present market value of the shares is still 40 per cent. below what would have then been their par value, an increase on which would be quite justified by the favourable developments now published. Just a final word before I pass to the formal business of the meeting. I have heard it stated that the capital is too small and may result in reflection in the near future or trouble owing to the difficulty of holding its products pending shipping facilities. Well gentlemen, my reply is that your board does not contemplate reflection. When the purchase price of the property comes to be paid it has other ideas of the manner by which this liability will be met. And with regard to the freight difficulties I am not sure that we shall be worried on this point, for I am not certain that we shall ship our concentrate. To set shareholders' minds at rest, however, I may say that as tin has a world value your company will experience no difficulty in getting advances against your product from time to time to assist it to carry on its mining operations. I now beg formally to move the adoption of the auditor's report.

The report was adopted.

# LEEUWPOORT (AFRICAN FARMS) TIN MINES, LIMITED.

(Incorporated in the Transvaal.)

CAPITAL - £275,000. (In 275,000 Shares of £1 each).

Directorate: Julius Jeppe (Chairman), alternate Alfred A. Barker; J. H. Ryan; A. G. Gill, alternate W. H. B. Frank; W. J. Gau; B. Southwell, alternate W. Nelson. Secretary: O. F. Brotherton (for the Witwatersrand Township, Estate and Finance Corporation, Ltd., Secretaries). London Committee: Lord Lucan, K.C.V.O.; Major-General Sir John P. Brabazon, K.C.B., C.V.O.; Gob H. Gasson (London Transfer Secretary); R. Roy McLean (Consulting Engineer); D. Wilkinson (Mine Manager); J. Irvine Jameson, Solicitor; Van Hulsteyn, Feltham & Ford, Johannesburg. Bankers: Standard Bank of South Africa, Ltd., Johannesburg, Head Office, The Jeppe Arcade, Commissioner Street, Johannesburg (P.O. Box 5036). London Transfer Office: Palmerston House, Old Broad Street, London, E.C.

## DIRECTORS' FIFTH ANNUAL REPORT

(Year ended 31st December, 1916.)

Submitted at the Fifth Annual General Meeting of Shareholders, held in the Board Room, The Jeppe Arcade, Johannesburg, on Thursday, 14th June, 1917, at 3 p.m.

To the Shareholders,

LEEUWPOORT (AFRICAN FARMS) TIN MINES, LTD.

Gentlemen, - Your Directors beg to submit their 5th Report on the affairs of the Company, with Auditors' Report and Financial Statements, for the year ended 31st December, 1916.

## REGISTRATION:

Your Company was registered under the Limited Liability Act of the Transvaal on 18th April, 1912.

## CAPITAL:

The Capital of your Company is £275,000 in 275,000 shares of £1 each, all issued.

## PROPERTY:

The Property of your Company consists of:—

- (a) Freehold farm Leeuwpoort No. 2415, Waterberg, of an area of 3,962 morgen 84 square roods, being the entire farm.
- (b) Mineral rights over portion 1,099 morgen 84 square roods, of the farm Rietfontein No. 2414, Waterberg, adjoining Leeuwpoort.

## OPERATIONS:

The Reports of Mr. D. Wilkinson (Consulting Engineer) and Mr. G. G. Hewitt (Acting Mine Manager) are attached, and give a résumé of the operations conducted on your Mines during the year.

The following figures give the results to the end of the year (December 31st, 1916):—

Mill, 17 stamps (2 Nissen and 15 Californian) ran ... 340.79 days: Ore milled ... 49,351 short tons: Duty per stamp per diem ... 1.6 short tons: Concentrates won ... 1,023 long tons: Average grade of concentrates ... 62.12 per cent. Average grade of ore treated (pulp sampling) ... 21.21 per cent.

In addition to the above mentioned 1,023 tons of concentrates produced, there were approximately 36 long tons of 63 per cent metallic tin grade to be obtained from accumulated partly-treated " middling product " concentrates in circulation throughout the plant, and awaiting final treatment.

## FINANCIAL:

Balance at Profit and Loss Account at 31st December, 1915 ... £26,380 19 5 Working Revenue and Expenditure Accounts show a profit for the year ended 31st December, 1916, of 25,809 10 1 Sundry Revenue, Rents ... 1,004 0 0

Less Interest Paid, Depreciation and Income Tax, etc. ... £2,493 1 7 Less Development Account, amount written off ... 26,902 15 4

£53,194 9 6

29,395 16 11

Balance at Profit and Loss at 31st December, 1916 ... £23,793 12 7

## BUILDINGS:

During the year £794 16s. 6d. was expended on buildings for housing the Mine employees.

## MACHINERY, PLANT AND EQUIPMENT:

The amount of £83,170 16s. 3d. is an increase of £6,321 8s. 11d., and represents the cost of additional Tin Dressing Plant.

## DEVELOPMENT:

The total of 7,536 feet of development, 1,719 feet of prospecting and exploratory work, and 498 feet of trenching work was accomplished during the year.

The details of development are as follows:—

	Feet.
(1) Spruit Mine	1,242
(2) Spruit Extension Mine	1,494
(3) C.N. South Mine	1,174
(4) West Mine	Nil.
(5) Nek Mine	1,166
(6) H.G. Mine	2,327
(7) New Strike	133
	<hr/> 7,536

## ORE RESERVES:

The summary of ore reserves shows a total of 90,050 short tons, containing 2.03 per cent. metallic tin.

## WATER SUPPLY:

The water supply has been ample for all requirements.

## MANAGEMENT:

The Directors have pleasure in again recording their appreciation of Mr. D. Wilkinson's able assistance as Consulting Engineer, and the energy and ability displayed by the Mine Manager (Mr. J. Irvine Jameson), and Mr. G. G. Hewitt, who has been acting during Mr. Jameson's absence on leave, and their respective staffs.

## DIRECTORATE:

You are asked to elect two Directors in the places of Messrs. B. Southwell and A. G. Gill, who retire in accordance with the provisions of the Articles of Association, but are eligible for re-election.

## AUDITORS:

You are asked to appoint Auditors for the ensuing year in the names of Mr. Alfred E. A. Williamson and Messrs. Fraser and McKenzie (who are eligible and offer themselves), and to fix their remuneration for the audit just closed.

We are, Gentlemen,

Yours obediently,

JUL. JEPPE (Chairman),

J. H. RYAN,

A. G. GILL,

W. J. GAU,

B. SOUTHWELL.

Directors.

O. F. BROTHERTON,  
for the Witwatersrand Township,  
E. and F. Corp., Ltd., Secretaries),  
Johannesburg, 14th April, 1917.

**Leeuwoort (African Farms) Tin Mines, Limited.—continued.**

Dr.	BALANCE SHEET AT 31st DECEMBER, 1916.	Cr.
Capital ... ... ... ... ...	£275,000 0 0	£144,362 14 9
Authorised—		
Issued in 275,000 Shares of £1 each.		
Sundry Creditors ... ... ... ...	18,367 9 3	5,965 morgen 536 square rods
Profit and Loss Account ... ...	23,793 12 7	Debtors, General ...
Balance at 31st December, 1916		Trade and General
Contingent Liability—		General ...
Uncalled Capital on 50 Shares		Second and Higher
Rand Mutual Assurance Com-		1 morgen 261 square rods.
pany, Limited ... ... ... ...	£120 0 0	5,962 morgen 255 square rods
		Mineral Right on certain portion of Farm Riet
		16,000 morgen No. 2314 (formerly No. 930), in extent
		1,075 morgen 261 square rods, both in Water-
		berg District (formerly Rustenburg District).
		Sheets, General ...
		200,053 15 6
		Development of Land ...
		27,015 0 0
		Machinery, Plant and Equipment ...
		33,170 16 3
		Headgear ...
		565 13 2
		Buildings ...
		10,340 18 6
		Permanent Works ...
		284 13 8
		Farming ...
		168 6 9
		Furniture and Office Equipment ...
		489 0 0
		Livestock, Vehicles and Harness ...
		1,308 6 0
		Machinery on Order ...
		202 13 0
		Mine Stores on hand ...
		7,737 2 6
		Shares Account ...
		251 14 3
		50 Shares Rand Mutual Assurance
		Co., Ltd., of £10 each (£6 paid up)
		Tin in transit ...
		20,324 3 0
		Sundry Debtors ...
		114 5 9
		Cash Account ...
		523 18 9
		Cash at Mine ...
		£227 12 9
		Cash at Standard Bank of South
		Africa, Ltd., Johannesburg ...
		296 6 0
		£523 18 9
	£317,166 1 10	£317,166 1 10

Dr. WORKING EXPENDITURE AND REVENUE ACCOUNT for Year ended 31st December, 1916. Cr.			
		By Tin Account	
To Mine Development	Redemption	£12,462 15 0	£111,411 12 11
.. Mining		13,857 0 8	
.. Transport of Ore		1,549 15 4	
.. Sorting and Crushing		1,667 10 1	
.. Milling and Concentrating		26,267 9 0	
.. Drying and Bagging		1,845 10 9	
.. General Charges at Mine		7,457 13 5	
.. General Charges, Head and London Offices		2,531 11 11	
.. Realisation Charges		17,962 15 3	
		£65,602 2 10	
.. Balance carried down		25,809 10 1	
		£111,411 12 11	£111,411 12 11

Dr.	PROFIT AND LOSS ACCOUNT for Year ended 31st December, 1916.	Cr.
To Depreciation on Farming Accounts, Furniture, Livestock, Vehicles, etc.	£706 6 7	£26,599 19 5
,, Development Account .....	26,902 15 4	
,, Income Tax (South Africa), year 1914-1915 .....	23 3 3	25,809 10 1
,, Estimated Tax on Profits, 1916, and Income Tax 1915-1916 .....	120 0 0	1,004 0 0
,, Interest paid .....	1,643 11 4	
,, Balance carried to Balance Sheet .....	25,793 12 7	
	£55,191 9 6	£55,194 9 6

O. F. BROTHERTON,  
(for the Witwatersrand Township,  
E. and F. Corp., Ltd., Secretaries).

To the Shareholders,  
LEEUWPOORT (AFRICAN FARMS) TIN MINES LTD.

We have audited the Books and Accounts of the Company for the year ended December 31, 1951, and have to report that we have obtained all the information and explanations we have required to enable us to form an opinion as to whether the financial statements are properly drawn up so as to exhibit a true and correct view of the state of affairs of the Company in accordance with the information and the explanations given to us, and as shown by the Profit and Loss Account and the Balance Sheet for the year ended December 31, 1951, and have to report that we are of the opinion that the financial statements given in the above Balance Sheet are in accordance with the best of our knowledge and belief.

Johannesburg 12th March 1917.

JULIE DEPPKE, Chairman

J. H. HYAN, Director

FRASER & MACKENZIE,  
Chartered Public Accountants,  
ALFRED E. A. WILLIAMSON,  
Incorporated Accountant (Vic.),  
Auditors.

P.O. Box 2997.

Telephone No. 1460.

Telegrams: "JOISTS."

# WADE & DORMAN, LIMITED,

217. Main Street (near End Street).  
JOHANNESBURG.

## IRON AND STEEL MERCHANTS AND STRUCTURAL ENGINEERS.

Makers of all classes of Structural Steelwork for General and Mining Purposes.

Steel Buildings, Roofs, Trestling, Bridges, Ore Bins, Steel Windows, etc.

Large Stocks of British Standard Steel Joists, Channels, Angles, etc., kept at  
Johannesburg and Durban.

Sole Agents in South Africa for the BRITISH STEEL PILING CO.

Also at South African Iron Works. DURBAN.

Telegrams: "JOISTS."

ENVELOPES  
WRITING PADS  
PENHOLDERS  
PENS

WHOLESALE  
AND  
RETAIL.

PENCILS  
ACCOUNT BOOKS  
EXERCISE BOOKS  
OFFICE BASKETS

## Argus Stationery Stores,

41, President Street,

JOHANNESBURG.

Box 1014. Phone 3232.

FILES  
GUARD BOOKS  
PAPER-  
FASTENERS

RETAIL:  
Carlton Hotel Buildings  
and  
94, Commissioner Street.

MEMO BOOKS  
ORDER BOOKS  
DIARIES  
LETTER BOOKS

# SIXTEEN BUTTERS' FILTER PLANTS

## AND FOUR EXTENSIONS TO FORMER PLANTS

now operating on the Rand and giving complete satisfaction to everyone concerned.

Full particulars and operating data will be given on application.

50 lb. samples of slime will be tested free of charge to determine its filtering capacity. Estimates for plants, accompanied by complete general arrangement drawing, supplied on short notice. Write us for pamphlet regarding our process.

**CHAS. BUTTERS & CO., LTD.**

(INCORPORATED IN ENGLAND)

187, Exploration Building, Johannesburg.

P.O. Box 2652.

Telephone 3701.

Cable Address: "HUBNERITE."

**FRASER & CHALMERS, LTD.,**

AGENTS FOR  
SOUTH AFRICA.

TRADE MARK



**DICK'S BELTING.**

*No Belt is a*

**DICK'S ORIGINAL BALATA**

*unless stamped every few feet  
with the Trade Mark.*

FACTORIES: GLASGOW, SCOTLAND.  
PASSAIC, NEW JERSEY, U.S.A.

SOLE AGENT—

**S. P. Ruthven,**  
3, WINCHESTER HOUSE,  
JOHANNESBURG.  
PHONE 80.  
TELEGRAMS: "BELTING."

BOX 3012.

## EXPLOSIVES

For Mining, Quarrying, Farming, Railway and Irrigation Work.  
"Permitted" Explosives for Coal Mines,

### AGENTS:

**LONDON**—CAPE EXPLOSIVES WORKS, LTD., 15, St. Swithin's Lane, E.C.

**TRANSVAAL**—REUNERT & LENZ, LTD Box 92, Johannesburg.

**RHODESIA**—L. R. FORBES, Box 683, Bulawayo, and Box 427, Salisbury.

**KIMBERLEY**—CAPE EXPLOSIVES WORKS LTD., & E. W. TARRY & CO., LTD.

**AUSTRALASIA**—KIRK O'BRIEN, Collins House, Collins Street, MELBOURNE.

### MANUFACTURERS of

Blasting Gelatin, Gelinates.

Ligdyn Dynamites.

"Cape Brand" Subsoil Dynamite

Fuse Igniters.

Bi-Sulphate of Soda.

Sulphuric and Nitric Acids.

Sulphur & Sulphur Lime Solution

Pure Glycerine.

Fuse, Detonators and Electric Blasting Accessories Stocked.  
Nitrate of Soda.

## CAPE EXPLOSIVES WORKS

LIMITED,

**P.O. DYNAMITE FACTORY,**  
SOMERSET WEST, CAPE PROVINCE.

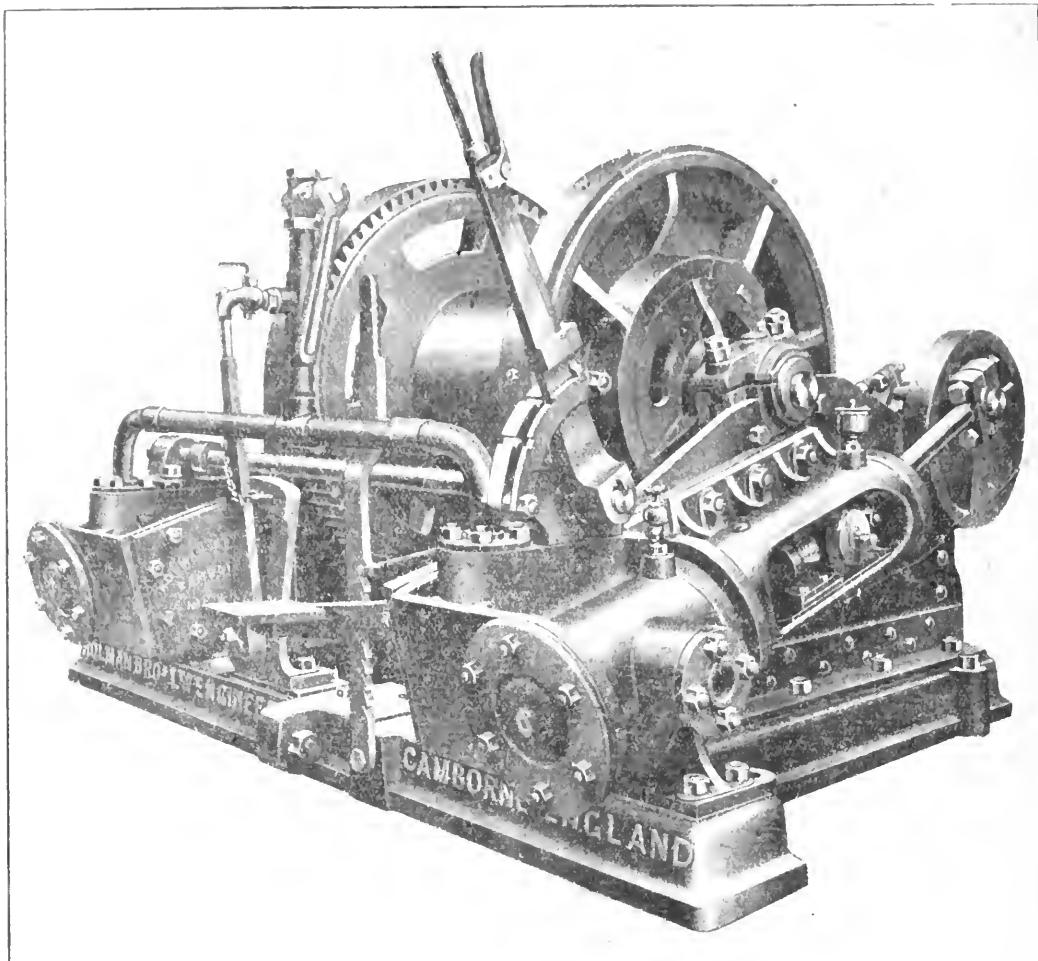
TELEGRAMS: "BELTING."

Fraser &  
Chalmers, Ltd.  
Corner House,  
JOHANNESBURG.

THE  
**South African  
MINING JOURNAL**  
WITH WHICH IS INCORPORATED  
"The South African Mines Commerce & Industries"  
ESTABLISHED 1891  
PUBLISHED EVERY SATURDAY

Fraser &  
Chalmers, Ltd.  
P.O. Box 619.  
Telephone:  
Private Exchange.  
Telegrams: "VANNER."  
JOHANNESBURG.

VOL. XXVI., PART II. NO. 1321 THE SOUTH AFRICAN MINING JOURNAL, JUNE 16, 1917. [WEEKLY, PRICE 6d.]



The Famous HOLMAN Stope Winch---Latest Pattern.  
IN STOCK AT JOHANNESBURG.

SOLE AGENTS

**FRASER & CHALMERS, Ltd.**

(INCORPORATED IN ENGLAND.)

Box 619.

CORNER HOUSE. JOHANNESBURG.

Phones 2605-10.

Printed for the South African Mining Journal Syndicate, Limited, by the Argus Printing and Publishing Company, Limited, Lower President Street, and Published by the Syndicate. Obtainable at all Branches and Agencies of the Central News Agency, Limited, and all News Agents and Railway Bookstalls throughout South Africa.

v.5.7